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INSTRUCTION IN CITY SCHOOLS CONCERNING THE WAR

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Being intensely interested in the stupendous importance and the far-reaching influence of the present European war, and knowing that some city superintendents as well as state commissioners of education maintain that all discussion and reference to the war should be avoided in connection with the public schools and that many more superintendents maintain that the war should be a vital factor in the school curriculum, the following syllabus was sent to city superintendents, state commissioners of education and various organizations in order to ascertain the use that the schools are making of the opportunity.

HOW TO TEACH THE WAR

My dear Superintendent,—

Shall the present European War be taught in the schools? How shall it be taught?

This most vital problem is now confronting every practical superintendent. Your answer will be greatly appreciated for this investigation.

Do you permit any discussions of the war by pupils? If so, what special precaution do you take to insure neutral attitude?

Do you believe it should be taught? Why?

How taught
- a. Class discussion
- b. Lecture method
- c. Map method
- d. Current news
- e.
- f.

How would you collect material for teaching?
How much time would you devote?
Can this recent European War be used to advantage in teaching the following, and if so, how would you proceed?

a. Geography
b. History
c. Economics
Civics
d. Society conditions (municipally, nationally and internationally)
e. Universal peace.
f. Hygiene
g. Eugenics

In looking over the list of 257 city superintendents from whom information was requested, and after carefully considering the 148 superintendents who did not reply, a tremendously significant fact was at once connected with the tenure of office of many of these superintendents. Personally knowing several of these men and how they hold their positions, there is no question but that they feel they can not run the risk of losing votes or becoming unpopular by speaking for or against this as their pedagogic training and ability demands. In a matter of such importance and far-reaching influence as this, surely the "political game" must play an important rôle since it prevents a decided expression by a man in such an important position.

Answers were received from one hundred and nine city superintendents, from the United States Commissioner of Education and from twelve state commissioners of education. In these answers, thirty-nine different states are represented. The total population of all the cities from which replies were received, is 18,138,965 in which the total number of teachers employed is approximately 60,000.

In the list of cities given below war is taught either as a separate subject, or with every possible school subject, or with history, geography, economics and hygiene. The horribleness of war and the spirit of peace are emphasized in the schools of all these cities. Likewise, it is the consensus of opinion of these city superintendents that the war is a great vitalizing principle in the teaching of text-book work.

The war is taught in the following 87 cities, having, in 1910, a population of 13,910,657.

Alliance, Ohio.
Anderson, Ind.
Athens, Tenn.
Aurora, Ill.
Baltimore, Md.
Bayonne, N. J.
Birmingham, Ala.
Bridgeport, Conn.
Brockton, Mass.
Buffalo, N. Y.
Cambridge, Mass.
Canton, Ohio.
Cheyenne, Wyo.
Chicago, Ill.
Cincinnati, Ohio.
Columbus, Ohio.
Columbus, Ga.
Covington, Ky.
Cripple Creek, Colo.
Davenport, Ia.
Des Moines, Ia.

Detroit, Mich.
Dubuque, Ia.
East Orange, N. J.
Elmira, N. Y.
El Paso, Tex.
Flint, Mich.
Fort Smith, Ark.
Framingham, Mass.
Fresno, Cal.
Goldfield, Nev.
Grand Rapids, Mich.
Great Falls, Mont.
Hancock, Mich.
Harrisburg, Pa.
Hibbings, Minn.
Houston, Tex.
Jackson, Mich.
Jersey City, N. J.
Johnstown, Pa.
Kansas City, Mo.
La Crosse, Wis.
Lakewood, Ohio.
Lancaster, Pa.
Lexington, Ky.
Madison, Wis.
Menominee, Mich.
Meriden, Conn.
Miles City, Mont.
Montclair, N. J.
Muskegon, Mich.
Muskogee, Okla.
Nashville, Tenn.
New Haven, Conn.
New Rochelle, N. Y.
New York, N. Y.
Newburyport, Mass.
Newton, Mass.
Oakland, Cal.
Ogden City, Utah.
Paterson, N. J.
Pine Bluff, Ark.
Portland, Me.
Providence, R. I.
Pueblo, Colo.
Reno, Nev.
Richmond, Va.
Riverside, Ill.
Rock Island, Ill.
Rockford, Ill.
San Bernardino, Cal.
San Francisco, Cal.
Scranton, Pa.
Seattle, Wash.
Sioux City, Ia.
South Omaha, Neb.
Springfield, Ohio.
Texarkana, Tex.
Topeka, Kan.
Utica, N. Y.
Waltham, Mass.
Washington, N. C.
Washington, D. C.
Waterbury, Conn.
Webster Grove, Mo.
Whitler, Cal.
Youngstown, Ohio.

In the cities in the next list some superintendents have asked their teachers to refrain from any mentioning of the war and to permit no discussion of the war by the pupils. However, some of the superintendents maintain that peace and sympathy may be mentioned and impressed at opportune times, but the war or the horror of the war should not be mentioned. Two cities have even dispensed with the teaching of current events.

In the following 22 cities, having, in 1910, a population of 4,228,308, the war is not taught.

Berkeley, Cal.
Bloomfield, N. J.
Boston, Mass.
Clinton, Ia.
Dayton, Ohio.
Eau Claire, Wis.
Fort Wayne, Ind.
Fort Worth, Tex.
Hamilton, Ohio.
Huntington, W. Va.
Louisville, Ky.
McKeesport, Pa.
Muncie, Ind.
Norwood, Mass.
Philadelphia, Pa.
Reading, Pa.
St. Louis, Mo.
St. Paul, Minn.
Salt Lake City, Utah.
Spokane, Wash.
Waco, Tex.
Yonkers, N. Y.

The following summary indicates how 109 cities are making use of the war. However, some of these cities teach the war as a separate subject besides teaching it with other current topics, and some cities correlate the teaching of the war with school subjects and with current events, while some teach the war correlated with current events only.

Eighty-seven cities teach the war.

Twenty-two cities do not teach the war.

Eleven cities teach the war as a separate subject.

Twenty-six cities correlate the teaching of the war with history and geography.

Eighteen cities correlate the war with every possible school subject.

Twenty-three cities correlate the war with current events only.

Twenty-eight cities teach the war but not current events.

Two cities teach neither the war nor current events.

Seventy-eight cities teach current events.

Sixty-two cities have a definite time for the teaching of the war.

Twenty-five cities teach the war unsystematically.

The time devoted by the different cities to the teaching of the war as a separate, a related or a correlated subject as the above indicates, is naturally classified into three groups. The first group of cities spends from ten to thirty minutes daily, the second from twenty minutes to one hour once per week, and the third group from ten minutes to twenty minutes twice per week.

The replies from twelve state commissioners of education indicate that eight believe the war should be taught, correlated with other subjects and used to vitalize text-book work. Three commissioners maintain that the war should not be taught, but that the events of the war might be used to advantage. And one says, "Have taken no action on the War."

Representative quotations from the state commissioners are as follows:

Payson Smith, State Superintendent of Education, Augusta, Me.:

"—— the leading events of the present European War should be taught in the schools, the material to be taken from some standard weekly journal that reports in general the progress of the week. The teaching of the subject should be followed carefully by superintendents to indicate whether or not any individual teachers are unable to teach this work without bias."

Mason S. Stone, State Superintendent of Education, Montpelier, Vt.:

"—— I believe in teaching about the war but not in anyway creating partisanship. The present war may be used to advantage in teaching geography, history and the like."

C. G. Shulz, State Superintendent of Education, St. Paul, Minn.:

"No doubt the European War is taught, or at least discussed in a number of public schools in Minnesota. When taught it should be without prejudice or bias, for or against either side. Many useful lessons in geography, history and economics and touching social conditions can be illustrated by discussion of the war situation."

C. H. Lugg, State Superintendent of Education, Pierre, South Dak.:

"—— in my judgment this war has not yet progressed to a stage where any profitable history of it can be taught, owing to our lack of information concerning the movements now in progress. I think that as a preparation for its study later a review with the class

of Official Documents bearing upon the European War which have been collected and published in pamphlet form by the American Association for International Conciliation might be helpful."

Charles A. Greathouse, State Superintendent of Education, Indianapolis, Ind.:

"I do not believe the present European War, as such, should be taught in the schools, but I am of the opinion that the events can be used in connection with other work, and general ethical problems touching upon peace questions."

Valentine Almy, Assistant Superintendent of Education, Rhode Island:

"Altogether too much time given now to the teaching of battles, campaigns and wars."

A part of the reply of Dr. P. P. Claxton, United States Commismissioner of Education, is as follows: "If I were to give advice to superintendents and teachers on this subject I would caution them against believing that the events of the war as occurring from day to day are especially helpful in teaching the geography of Europe. Geography should be taught in the schools as a science and must have its own method and order of development. These events, however, do offer most excellent opportunity for the application of principles of geography, illustrating how geographical features determine boundaries, location of highways, positions of cities, etc. I should also want them to present the whole matter in such way as to cause them to see clearly the folly and crime of all international wars."

Thus far, it has been the purpose to show the extensiveness of this investigation, the value of the information received and a general idea of what is really being done with the European war in the public schools of the United States. However, let it be clearly understood that this investigation and the conclusions on the same are based absolutely upon the one hundred and nine cities from which replies were received. No assumption is made in this work that the same proportion of cities and population where it is maintained "War should Be Taught," will be the same for all the rest of the cities which did not reply and from which no information was asked.

War Should Not Be Taught

In order that a clear conception may be had of the decisions of the city superintendents who maintain that "War Should Not Be Taught," representative quotations from letters and reports are herein given:

Acting Superintendent H. C. Jacobs, Philadelphia, Pa.:

"Not now."

F. L. Wiley, Secretary to Superintendent, St. Louis, Mo.:

"The European War is not taught in the St. Louis Public Schools. While such instruction would, of course, give great opportunity for valuable emphasis upon geography, history and other subjects men-

tioned in your circular inquiry, it is felt here that other major interests of the war make the discussion of the subject in the schoolroom inadvisable."

Superintendent F. B. Dyer, Boston, Mass.

"The greatest tragedy in the history of the world is now being enacted. Nearly all of us have an ancestry reaching back into the nations involved and it is but natural that we should be deeply moved. Nevertheless all excitement resulting from the events of the war should be kept out of the schoolroom and the regular schoolwork should be carried on under as nearly normal conditions as possible."

Superintendent D. Lange, St. Paul, Minn.:

"I do not think that the present European War can be taught to any advantage in our public schools, at least not in the schools of this part of the country, for the following reasons:

1. I do not wish to foster the war spirit in our boys.
2. Our people in general, including our teachers and our newspaper writers, have such a slight acquaintance with European conditions that it would be impossible to have the facts presented impartially.
3. The public schools are in great danger of being overloaded with anything and everything which for a time monopolizes the public interest. We must have some time to teach school if we are going to satisfy ourselves and satisfy the public.
4. We have not forbidden teachers referring to the War, but we do not make a study of it.
5. A good many of our teachers in the upper grades and in the High Schools do pay some attention to current subjects, but we have no systematic authorized course."

Superintendent E. J. Brown, Dayton, Ohio:

"a. Our belief in 'Peace.' b. Children of all nationalities in our schools. Wish to offend none. c. President's proclamation of neutrality of speech as well as action. Unreliability of news."

Superintendent Bruce M. Watson, Spokane, Washington:

"—— in my opinion children are hearing as much as they ought to hear about the European war at the present time. There is no definiteness to any of our information to make it worth while to attempt to teach the war at present. Let us wait until it becomes history."

Superintendent Charles S. Foos, Reading, Pa.:

"I have issued a bulletin requesting the teachers to make no reference to the war whatever, but to impress the thought of 'Peace on earth and good will toward men.'"

Superintendent D. H. Christensen, Salt Lake City, Utah:

"It should not at present. 1. Because I am unable to discover any possible profit and I see much harm. 2. We have no reliable information on which to base instruction. There's no hurry."

Superintendent J. N. Study, Fort Wayne, Ind.:

"No, not when there are diverse nationalities represented."

Superintendent J. B. Richey, McKeesport, Pa.:

"So cruel, so uncalled for, so barbarous, so heathenish, so, so, so . . . Let us try to forget it."

Superintendent W. M. Foulk, Huntington, W. Va.:

"At present no,—emphatically no ——. Upon what authentic information can instruction be based at this early, unsettled stage of hostilities?"

Superintendent Austin H. Fitz, Norwood, Mass.:

"War is the worst of all crime and therefore ought not to be taught. To teach about any crime is to focus attention upon it and therefore to stimulate its commission.

"Webster defines a crime as an offense against the public welfare. This is substantially the definition of a crime as taught in the Harvard Law School. Certainly war comes within this definition.

"Time was when hangings were public. Crime did not decrease, however, because the publicity acted as a stimulus to the commission of crime. The war can be used to advantage in the teaching of history and geography from the view of making the teaching of those subjects more effective but it ought not to be so used. The harm outweighs the good. The teaching is about the war."

In defense of some of these superintendents, it is only fair to say that some might maintain that certain events and facts of the war should have a correlative value with some of the school subjects. However, from an educational viewpoint, the following is an endeavor to summarize the strongest and most logical reasons and conclusions of the city superintendents in general in regard to the war.

Inasmuch as the best methods of procedure in the public schools regarding the teaching of the war are uncertain, the relative values of such teaching are questionable and the results are still more questionable. The best and safest plan is to proceed along the old safe and tried pathway. For what can be obtained by a discussion of the European war? To discuss the unknown causes of the war, the inaccurate information, the battles waged, the victories and reverses of the contending nations and the like, will be but to give attention and time to that which later and authentic facts will prove to be wrong in the majority of cases. At present even historians and scholars themselves differ greatly as to the causes of this war. If such learned men are driven ofttimes to a state of frenzy through national prejudice and racial influences, how can untrained, "more passionate schoolmen," teachers, and pupils of all nationalities mingled together, make a critical study of the war? Suppose such were the outlined course and the endeavor were made to teach the war, whence the material for this study? The various newspapers, magazines, etc., or the majority of them, are published for the

sole purpose of moulding public opinion. The real facts and truths of the dreadful war are under the strictest censorship. The daily official communications from the various nations are but a series of contradictions. Little value, unless it is a negative one, can be obtained by distracting the attention of pupils from their regular class work, by inflaming their imaginations with the personal experiences of a few war motor cyclists, Zeppelin and aeroplane adventurers and atrociously bloody battles.

In brief the diverse nationalities, the avoidance of public feeling and possible public contention, the unreliability of the news, the biased and wrong judgments formed by immature minds, the lack of real facts to judge properly, the poor judgment on the part of many teachers, the teaching of crime begetting crime, the horror and cruelty of the war, are the reasons in full or in part why some superintendents claim "war should not be taught" in the schools.

War Should Be Taught

In order to prevent a radical opposition and a biased disposition on the part of anyone to this phase of the question, it is quite necessary for all to have a broad comprehension of what is meant by "teaching the war." With this suggestion in mind, quotations from those superintendents who maintain that the war should be taught, will now be given.

Superintendent W. H. Maxwell, New York City, N. Y.:

"In at least one of our sister cities, if we are to believe the newspapers, all mention of the war is forbidden in the classroom. Even the teaching of the geography of Europe is forbidden while the war lasts. I have no sympathy with a position of this kind. Children who have reached the age at which they can read the newspapers are neither made nor kept virtuous by preserving silence in the classroom regarding what they and all the rest of the world know, at least vaguely, and beyond a doubt ignorantly."

Superintendent F. A. Soper, Baltimore, Md.:

"I think it is important to follow the war as it develops. This war is in the living present and involves stupendous issues. It will therefore appeal to the minds of the children in a powerful degree."

Assistant Superintendent O. G. Frederick, Detroit, Mich.:

"—— such important world news as the present war must be discussed in the schools and the wise teacher will see to it that the historical, geographic and economic aspects of the war are treated without animosity or personal bias.

I do not see how any teacher can refrain from enforcing the doctrine of Universal Peace by pointing out the awful cost of the present war in lives, in works of art, in commerce and industry."

Superintendent Alfred Roncovieri, San Francisco, Cal.:

"The war is taught as a part of Current Events. All grammar classes have been asked to depart from the prescribed Course of Study in geography and take up the map of Europe. We have cautioned the department not to express opinions on the merits of the war, not to refer children to the details of blood and massacre."

Superintendent E. L. Thurston, Washington, D. C.:

"I am watching the situation but have found so far that while there is considerable treatment of the matter in connection with current events, no case has risen to my knowledge in which any personal controversy has taken place, or any injury resulted from permitting the war to be a live topic."

Superintendent I. I. Cammack, Kansas City, Mo.:

"We are cautioning our teachers to be careful to maintain a strictly neutral attitude, and while they are at liberty to teach the facts, they are advised not to indulge in their own personal opinions in regard to the innocence or guilt of parties with reference to the War."

Superintendent I. O. Winslow, Providence, R. I.:

"Principals.—Please advise your teachers to avoid any discussion of the European War with their pupils or in their hearing, involving an expression of opinion favorable or unfavorable to any one of the contending nations."

Superintendent F. H. Beede, New Haven, Conn.:

"I have left this mainly to the good sense of the teachers, believing that the feeling of neutrality which prevails generally in this country, would be observed by our teachers in discussing this matter in the schools. . . . we should be omitting a most important opportunity for the animated study of geography and history, if the discussion of war topics were forbidden in the schools."

Superintendent J. H. Phillips, Birmingham, Ala.:

"—— the European War is now the livest topic in the schools. Free discussion is permitted by pupils, but the teachers are enjoined to observe strict neutrality."

Superintendent John R. Wilson, Paterson, N. J.:

"Discussion of the 'War' by pupils has not been forbidden. No precautions have been taken to insure neutral attitude. Although Paterson is a city with a population of 130,000, in which there are many people of foreign birth, I am quite sure any discussion by school children is not at all likely to create any trouble."

Superintendent W. A. Greeson, Grand Rapids, Mich.:

"—— the recent European War can be used to advantage in teaching geography, history, economics, social conditions, universal peace, and hygiene."

Superintendent F. E. Downes, Harrisburg, Pa.:

"Our advice has been consistently directed with the idea in mind that we are now making history and that the war should be taught—."

Superintendent M. G. Clark, Sioux City, Iowa:

"Neutral attitude is maintained. It means a better understanding of geography and of European ideals and ideas."

Superintendent Alvin N. Cody, Flint, Mich.:

"We certainly do discuss the present European war in our schools. We try, however, to be perfectly fair in such discussion and draw many splendid lessons as to the final outcome and the possibility of universal peace. We have class discussions, something of the lecture method, and the maps. This is an opportune time to teach geography, history, economics, civics, and society conditions. It is also a great opportunity to study South American countries and to see how we might increase our trade with them since we are prohibited from trading with Europe to any great extent."

Superintendent David Gibbs, Meriden, Conn.:

"It is our duty to see that the older children understand the facts as far as known, so as more fully to realize the horror of war and the importance of peace."

Superintendent L. P. Benezet, La Crosse, Wis.:

"I have encouraged all of our principals and teachers of history to discuss the present European war, taking care that it is shown that whatever blame is to be fixed does not rest upon the peoples involved, but upon their rulers and upon the military casts among the nobility. I, myself, gave two lectures to our high school students, illustrated by maps which I made for the occasion, showing the ethnic divisions of Europe and how many wars have been caused by the attempt of so-called statesmen to divide the map of Europe without the slightest reference to the wishes of the people concerned."

Superintendent C. M. Bardwell, Aurora, Ill.:

"—— in response to a popular demand, they have changed their plan and are now giving a very fair statement of the war news to date. I have visited a number of classes, . . . and I never have heard one word that would offend any partisan, nor have the teachers exhibited any partisanship. I believe that it will teach geography, that it will be an excellent background for the present and future study of history, and that it will promote universal peace."

Superintendent Wm. D. Parkinson, Waltham, Mass.:

"Teachers, of course, are inadequate to the task, but who is less inadequate? Teachers may need to be cautioned, and particularly to be instructed, but they do not need to be muzzled. It is even more necessary in the humbler institution than in the loftier to exercise one's freedom with common sense and self-restraint, but academic freedom is as vital to the public school as to the university. Let the teacher study civilization in the embryo and act accordingly."

Superintendent R. B. Dudgeon, Madison, Wisconsin:

"—— notice should be taken of the European War . . . some discussion can be permitted in regard to the physical and political geography of the countries involved in this war. The general subject of Universal Peace should receive attention whenever occasion arises for its discussion."

Superintendent F. W. Conrad, San Bernardino, Cal.:

"Americans should not shut their eyes to the events of the greatest war of all times. Children should not be deprived of seeing the making of history now going on."

Superintendent Wilson M. Shafer, Cripple Creek, Colo.:

"It is folly to think that you can prevent the discussion of any matter so universally of interest to the American public and to the school public. I have found no action necessary other than to say to teachers, 'Be discreet and always insist upon temperance, toleration and the necessity for suspended judgment until we are certain we have all the facts upon which to base final conclusions as to matters of national guilt or responsibility.' The matter is discussed freely and frankly and opinions are not denied. I have had no single difficulty over this procedure. It is an opportunity for teaching so many lessons of value to our democratic school children."

Thus, as the above quotations indicate, eighty per cent of the superintendents claim that the war should be taught because of the lessons in tolerance, sympathy, philanthropy, judgment, character building, patriotism, horrors of war, universal peace, and in motivated geography, vitalized history, personal hygiene, comparative civics and economics, practical neutrality and social conditions. While not all these topics are taught in any one place, yet a good number of them are taught in most of the cities.

How to Teach the War

Let it be clearly kept in mind that no endeavor is made to designate in a pedantic way, "this is the way to teach." Only suggestive features are herein given, which it is hoped will be of value to the wide-awake teacher. Although it is believed that the methods suggested are valuable and could be used to great advantage in practical teaching everywhere, yet local conditions, influences, environment, public sentiment, etc., are to be gauged by the good common sense of the teacher.

No claim is made that the various kinds of information taken from the different publications (newspapers, magazines, periodicals and war bulletins), are always authentic, but the claim is made that many publishers make an honest endeavor to give the best that is known, and that the best authorities are contributors to the same. Furthermore it is believed that approximate truths and enough valuable information can be obtained in their complex relationships to present and past conditions, so that nearly every subject in the public schools can be vitalized and motivated with new life, through which efficient and valuable work may be done.

Again, no claim is made that the public schools can teach the European war thoroughly, because this war is so great

and comprehensive that if the greatest university in the world were to teach nothing but war and its stupendous relationships to past and present human activities and tendencies, it would find itself utterly swamped with material and unable to teach it properly.

Methods of Teaching

In every grade a short daily period should be devoted to the teaching of the war, especially from the fourth grade on through the high school. Special topics of interest may be assigned to the pupils on which they are to gather information from every possible source; in some places parents may even be asked to co-operate with their children in securing this material. During this period of teaching the war, regardless of the method used (class discussion, lecture method, map method or current news), a correlation may be intimated and a relationship shown to every school subject possible. This correlative teaching of the war may be emphasized, especially in history, geography, civics and economics, and hygiene. However, undue time should not be devoted to the war because one extreme is as bad as another.

The work should be systematized and organized with great care by the teacher. To illustrate, for a whole week pupils should gather information on the economic phase of the war and its relationship to the United States, from such sources as newspaper clippings, magazine articles, cartoons, maps (the *Times* War Maps, war manuals, magazine maps, and newspaper maps), and personal inquiry by students from bankers, business houses, manufacturing establishments, etc. In classifying the material, such clippings as the following should be placed under the heading: *Increase in Manufactured Products,*—" Chicago, Nov. 23,—British orders for more than $15,000,000 worth of vehicles, automobiles, wagons, sleds, harness and equipment were brought back by Frederick S. Fish of South Bend, Ind.—England has also contracted for 500 automobile trucks from Kenosha, Wisconsin, firm, while the French government has ordered more than $1,000,000 in automobiles from Jackson, Mich., factory.—Another wartime order made known today was a British order for 5,000,000 one-pound tins of corned beef."

The following clipping should be placed in the *Commerce* list under that of exports. " 'I do not believe I am wrong,' says Romulo S. Naon, Embassador from Argentine republic, 'when I say the Argentine republic offers to American manufacturers today a market of not less than $100,000,000 over and above the present exports to our country.' "

Many clippings of like nature could be collected in the course of a few days, which, under the guidance of wise teachers, would throw more light on economics and world trade than is usually done in the course of a year, because the pupils are collectors and users of material in which they are interested.

In taking up the individual topics, the first and seemingly most important one is that of universal peace which is very closely and intricately related with social conditions.

Universal Peace

According to the comprehension of the pupils, a contrast may be made between the European school child and the American school child, the strange contrast of the European teacher with shouldered musket and the American teacher with her happy and interested pupils, a still stranger contrast between the European schoolhouses (now used for hospitals, etc.) and the American schoolhouses filled with the future citizens of America. Sincere appreciation on the part of all children that they are now Americans, regardless of racial origin, could be easily made quite emphatic. Respect for all nationalities and political beliefs contained within the schools could and should be made with lasting impressions because the children now feel they are truly Americans in a great democracy where people respect other people and agree to disagree in good spirit.

Through the horribleness of this war, it is believed that universal peace and the brotherhood of man can be and are hastened by America's sane attitude. Such an event as a special prayer day for peace, encouraged and set apart by our devout President, Mr. Wilson, and taken up by all churches, must surely have some influence on every American's conception of peace and brotherhood. A representative example of this influence is shown by Superintendent George L. Farley, Brockton, Mass., in his bulletin to teachers of September 11, 1914. "The Superintendent suggests to all teachers and principals that in discussing the situation in Europe, they be careful not to take sides with any of the nations, but to maintain a neutral position in accordance with the wishes of President Wilson, as all will realize that there are children of all nationalities in our schools."

Dr. Maxwell, Superintendent of Schools, New York City, says:

> "Our constant aim should be to clear the minds and hearts of our children of old-world hatreds and prejudices, whether these hatreds and prejudices are racial, social, or religious. . . . Sublime is the

undertaking to strip millions of children, in whom the lust to strike the racial enemy is innate, of the inborn propensities to strife. Therefore, a teacher who, before her pupils, assails the Austrians or the Belgians, the English or the French, or the Germans, or the Russians, or the Servians, is guilty of two heinous offences. The first is an offence against a child. He may wound the sensibilities of a deeply sensitive boy or girl, and this, as I have often told you, is the teacher's cardinal sin. He offends against our national patriotism, which was and is, to make one, on American soil, the children of all the earth's nations—to wipe out and not to perpetuate racial prejudices."

Again, no more suitable words could be uttered to illustrate the desired results of the teaching of the horrors of war than those spoken by Dr. Maxwell regarding the collateral horrors. He says:

"No occasion should be neglected to impress upon our children the horrors of war—not merely the immediate horrors of the battlefield, but the collateral horrors that follow in the wake of war—the orphaning of tender children, the widowhood of loving wives, old age deprived of its natural support, the flower of a country cut off in its youth, the poverty, the disease, the unspeakable anguish of mind and body. And all this to the end that our children, to whom, in years to come, may be committed the issues of peace or war for our beloved country, may learn that war is so dreadful a thing that it should never be entered upon lightly, but only as a last resort in defense against national peril or in support of some fundamental principle of transcendent value to humanity, as for instance, the abolition of slavery with its horrors worse than war."

Franz Boas, the Columbia anthropologist, on teaching the war (*Everybody's Magazine,* November 1914), expresses most emphatically the real existing conditions in America and very largely the teaching spirit in the American public schools when he says:

"Since our own political interest in the war in Europe is weak, we stand naturally nearer to the standpoint of international morals and are inclined to misinterpret the motives that sway the nations at war. We should not deceive ourselves. It is only the lack of immediate interest that determines our attitude. We are no less eager than the nations of Europe to instil the idea of the preponderance of national interest over human interest into the minds of the young. We, too, teach rather the lessons of aggressive nationalism than those of national idealism, expansion rather than inner development, the admiration of warlike, heroic deeds rather than the object for which they were performed. Given a national conflict, and the same unreasoning passions will sway our people that are carrying Europe to the brink of ruin."

The attitude of Dr. Condon, Superintendent of the Cincinnati Public Schools, cannot be over-emphasized when he says, "the principal use to be made of this war is for the purpose of teaching by contrast the blessings of peace . . ."

The work of the Red Cross, together with its history and past humane work, such as is given in the *World's Work*

("The Red Cross of the Warring Nations"), could be one of the topics for special investigation for several days. All the present activities, as given by newspapers and magazines, may be taken up and directed along the proper channels. These clippings, gathered by the pupils, should be organized and systematized according to their values in an orderly, interesting and pedagogical manner.

Closely related to this, information may be gathered regarding the work of churches (such as, "Nuns acting as Nurses," and the like), philanthropic movements ("John Wanamaker sends Big Ship Full of Supplies to Relieve Thousands of Homeless and Hungry in Belgium"), the humane societies, the relief funds, benefit concerts, theatre performances for relief funds and women's entertainments for war sufferers. All these affairs afford the schools the greatest opportunity in the history of the world for the teaching of morals, tolerance, ethics, justice, and peace. Magazines and publications representing different nations, such as the *Vital Issue,* the *Fatherland,* and others, could be used by the wise teacher to develop fair-mindedness, tolerance, the ability to see two sides, good judgment and respect for those who differ.

The lecture method must not be overlooked on account of current news in the teaching of universal peace. Prominent influential speakers as well as the teachers should give lectures along these lines. Also, maps could be used to show the folly of national divisions and boundaries.

It is also believed by many that discussions and debates by the children themselves along many lines would be beneficial and would make lasting impressions. Superintendent J. E. Bentel, Goldfield, Nev., says, "Our literary societies had joint debates on who is responsible for the war. Our teachers lecture on it in general assembly once a week. We have all the reviews coming to the reading table and students are encouraged to study the war news and leading editorial opinions on both sides."

Superintendent W. M. Shafer, Cripple Creek, Colo., says, "There is no more danger of fomenting antagonisms among pupils of different normal loyalties than there is of doing the same thing during the local, state or national political campaigns and the same wisdom and sobriety of the teaching force which prevent woeful outcomes in the one case will prevent them in the present situation. . . . I have seen our own schools go through the bitterest of strike and labor contentions and our safety then was in the good sense and judgment of teachers and principals."

Social Conditions

Superintendent Parker, Waltham, Mass., says, "The public school is an instrument fashioned by society to perpetuate and promote its own civilization. . . . The school is always dealing with those tendencies of human nature that make for or against civilization. For civilization is not a matter of arts and sciences, of engineering and architecture, of invention and discovery, or even of modern conveniences. It is a matter of social disposition. It has to do not with physical forces and physical laws, but with social forces and the laws of human nature."

If this conception of the public schools has no element of truth in it, then the result, as Dr. Boas points out, from the race viewpoint would be most appalling. He says, "If the struggle now devastating Europe were as has been claimed an unavoidable war of races, due to deep-seated 'racial instincts,' then we should despair of the future of mankind. Beyond the conflict would be others without end, as the development of international intercourse brings into consciousness new types of racial differences."

Social relationship, internationally, with the nations of Europe and with those of the western hemisphere, furnishes valuable and interesting topics. While it is true that much may be conjecture, yet that does not destroy the valuable inherent lessons involved in the study and application of approximate social truths. A little time might be wisely used in the discussion of social relationships of European people at present and the effects of the war upon European social life. Comparisons may be made with the former European wars, that is, the social effects internationally and the social life nationally and municipally after every great war. Also, the effects of past wars upon the aristocratic classes and nobility should be noticed, and the probable effects of the present war upon the same. In connection with these effects, most valuable and interesting lessons could be developed as to the effects that the war has upon religion, character, standards of living, etc. While it is true that nothing absolutely definite could be evolved, yet valuable fields of knowledge would be entered into because of the pupils' interests. Conservative judgments might be formed and developed here by having high school students make estimates based upon past facts as to the lasting effects of the present war.

The methods most advantageously used in this social study would be a combination, at times, of the map, lecture, debate and class discussion methods. From every justifiable source

possible, information may be gathered along every phase of this social study.

Education

The effect and result that the present war will have upon the educational world, especially in Europe, are very valuable for consideration in the American schools. The great responsibility that rests upon the American youth as the future master in education could be used as a valuable stimulus. Several hours of recitation work during the year could be devoted to this topic. In this, as in other subjects, the teacher might suggest that pupils are to read and collect, outside of school, all the material possible on any educational phase connected with the war, such as the destruction of schools and universities, the effects of the war on German, English, and French higher education and the like. After material has been collected for a week or more, all the pupils should report the nature of their information to the teacher, who then might systematize the articles and clippings (the pupils could do this in certain grades), on which a very interesting and valuable recitation could be held, each pupil being held responsible for a recitation on his individual collection.

History

In recent years the real pedagogic value of textbook methods in teaching history has been questioned. At present while volumes of history are being made almost daily, greater objections than ever are made to the old methods of history teaching. If it is agreed that history is the activity of man overcoming his environment, and civilization is the result, then no truer study of history and civilization can be made than by the study of the present war in its relationship to the past. In this method of study, special topics may be assigned on which pupils are to gather information. This may break up the usual order and procedure of text-book methods, but the results will be worth the extra work incurred on the part of the teacher.

The following method of M. B. Livingston, Eighth Grade, Farren School, Chicago, Ill., may be one of general value:

"At the beginning of each history period a child who has a picture or a cartoon shows it to the class and explains it. If I consider these very good, they are pinned on the bulletin board. Often the child may wish to ask about the picture or his cartoon, etc. I have the children bring clippings from the newspapers which they read or tell about. I prefer the child's own presentation but ask him to bring the original article because he often makes mistakes in his interpretations."

To illustrate the topical method, the *World's Work* has an article on "The Laws of War," by Lyman Beecher Stowe; and other publications have articles of a like nature. The teacher, when assigning this topic on international law, might ask the pupils to give a brief history of the source and origin of international law in addition to the gathering together of the present literature on the subject. Of course such an extensive subject, reaching as far back as the Amphictyonic Council among the Greek City States in the seventh century, B. C., would require at least several days' time for high school students. In grade work this could be given in story form by the teacher at the same time the articles are discussed by the pupils.

Probably the first general topic that should be taken up would be the land area and location of the different nations, the physiographical conditions, race origin, population, kinds of government, social and religious life, education, and economic conditions. This might best be given in the form of a recitation lecture by the teacher. At any rate, not much time should be devoted to this too general topic, but just enough time so that the pupil becomes intensely interested and has enough general knowledge to understand the more specific topic. When this is done, interesting comparisons may be made by the teacher in order to show the nature of the desired work. Special topics could then be assigned for collected information. Too much emphasis can not be laid here on present events and happenings as the nucleus for past events. That is, history should be taught in the opposite way from what it is taught at the present time. However, while the inductive seeking of past events through the present is emphasized, the value of deductive teaching should not be minimized.

President G. Stanley Hall says:

"Never have the minds of our young people been so open to information about and comprehension of the essentials of European history and all its best lessons. Some of the teachers begin with a sketch of the War of 1870 and the German unity that followed, with Prussia and the Hohenzollerns dominant. Another sketch of the development of the Austrian Empire from the conquest of Hungary to the belt of Slavic states about it might follow, and then could come an outline of the Balkan War and the story of what Turkey in Europe and Constantinople, so long a focus of European diplomacy, now mean and have meant. Something too should be taught of the development of colonies by England and also the growth of her navy. The naval history and policy of France and Germany, the story of the partition of Poland as it could be told in a quarter of an hour or more, what pan-Germanism and pan-Slavism mean and are, and how they would reconstruct the map of Europe:—all this told simply and briefly, with maps, could be brought home in outline

to the comprehension of every high school boy or girl who would thus have in mind the historic key for understanding many if not most of the causes and stakes at issue in the war."

The topics in political history taking into consideration the different kinds of government, how ruled, etc., would be of a fascinating nature to pupils. The question as to the future of monarchy, democracy and allied topics should also be discussed. Regarding many people's ideas of the downfall of monarchy such examples as King Albert and Queen Elizabeth of Belgium, and the people's idolizing attitude of them, because of their suffering side by side with their subjects, might at least show some reasons for the continuation of monarchical systems of government.

The commercial relationship with its influence on history and its determining factor in the development of nations is an important topic. The history of canals (Erie, Suez, Kiel and Panama) and their national as well as international influence may be treated with the history of nations. Phœnicia, the Hanseatic League, and various cities in the past, such as Genoa, Venice, Florence and others of like importance should be considered and related with the present international commercial relationships. With considerable emphasis, the industrial history of nations may likewise be treated.

The history of wars may be taken up in order to discover if possible their source and origin, as for example, whether or not the wars are outgrowths of conquest, of religion, of kings, of nobility, of aristocracy, of the desire for expansion, of politics, of commerce, of industry, of alliances, or of economic conditions.

The teaching of the present war itself is of great value. President Hall says:

"There are first the standing armies of each country, the kinds of troops, cavalry, infantry, navy and their organization, from the squad to the corps, the officers of each rank, their training, the uniform and arms, what each soldier carries, how they sleep, are fed, how the sick, wounded and imprisoned are cared for, how the dead are buried, the work of the Red Cross, pay, what mobilization is, the series of reservists, African and Asiatic auxiliaries, transportation of troops, strategy, flanking, kinds of artillery, from rifles and machine guns up to the siege mortars and howitzers, their manufacture and that of ammunition, navies, kinds of ships as submarines, aeroplanes, Zeppelins, the Kiel Canal and what it means, and now perhaps the Suez, sanitation and care of health, something about the lives and character of the great generals, spies, etc.; something of all these might be taught."

The laws and regulations of wars furnish an instructive and valuable field of investigation at present, because of the massive amount of material bearing directly upon this phase of daily happenings.

The nature, influence and result of past treaties should be discussed in full at this particular time because of the need of a knowledge and comprehension of the desired and hoped for future treaty. The necessity of good statesmen and diplomats in the present intricate difficulties and the results of poor treaties of peace in the past should be emphasized, because the future of Europe is in the hands of the statesmen who will soon decide what the conditions of peace shall be. Some general understanding of this should be had by all American children.

The history of international difficulties settled without war could be compared with those settled by war. Also, a very much needed and important topic for discussion in the public schools is the law of neutrals.

Thus the various topics could go on almost indefinitely, but before closing the ideal of the "European Republic" and the Federation of the World with universal peace firmly established, should be, most of all, firmly implanted in the minds of all American children by the sane teaching of the world's past and present mistakes. By pointing out every feature that bears directly to this long looked for State, Utopian though it may be, and the plausible results of the present European disaster and folly, which it is believed will hasten universal peace, great lessons that will influence the attitude and make-up of the future American citizen may be taught that will be of a lasting nature.

Civics

In this subject as taught in the grades and high school, a comparative study is, without doubt, the most valuable one under present world conditions. In teaching our township or county, municipal, state and national government, the teacher should make comparisons with the European districts, cities, provinces, and institutions of government. In these comparisons, the class should gather, with the teacher's help, information on the German Bundesrat, the Reichstag, the Prussian Diet, the Russian Duma and brief comparisons of each of the European nations. The colonial policies of all the European powers would be both interesting and valuable. Although a comparative study of governments in the civics work may be emphasized, yet the greater part of this work may be included in that of history and economics.

Economics

In the grades and high schools of many cities the subject of economics is considered too difficult. However this is no reason why the economic facts which affect the child's home

and daily life may not be taught. Many children's training ends before reaching the high school, and comparatively few children's training goes beyond. These are the very boys and girls who need this economic training most. And since the present war has greatly modified and made possible many obvious lessons, children should not be turned out in gross ignorance because these lessons were formerly deemed too academic. Even some of the children in the primary grades know some of the effects of the war if through no other way than that of toys.

The extensiveness of this war is well shown by President Hall when he says:

> "Relatively few industries, not only of the belligerents but of every country in the world, are unaffected by this war. It opens to us, for instance, unprecedented trade possibilities in South America, and while it closes some of the markets, so it opens others for the first time, and a merchant marine and all ships sailing under a neutral flag are increasingly needed. The effects of the war on food-stuffs, wool, kerosene, silk, cotton, steel, coal, prices, markets, labor and also immigration and temperance, and about every line of productive industry and every avenue of foreign trade:—all are profoundly affected and sure to be more so if the war lasts, and every industrial and commercial relation will find itself in a new world when the war is over, so interdependent have the great countries of the world now become upon each other."

Most of the obvious economic lessons may be correlated with history, civics and geography. At times it would be very profitable to devote one or more periods of class recitations on a specific subject, such as national expenses, cost of militarism, national expenditures on the army and navy (national comparisons), pay of the soldiers, pensions, destruction of property, and comparisons of national debts.

Without any possible criticism, many interesting debates could be held in the high schools on world trade, merchant marines, the value of navies, modern naval warfare, mines, and the financial benefit or detriment of the present war to America. As an illustration, Superintendent J. F. Keating, Pueblo, Colo., says, "our literary societies discuss various phases of the war and the high school has held one public discussion of the question, Resolved 'That the triumph of Germany in the present contest would retard the progress of democracy.' One teacher in our high school corps thought this discussion should not take place. She feared it might arouse bad feeling, for we have a school of mixed nationalities, Austrians, Italians, Scotch, Irish, English, and Germans well represented. However, we decided to let the debate go on. The result was an excellent program and no ill-feeling so far as we can discover was in any way aroused."

The immediate economic losses to society from men being killed may be taken up by advanced high school students by having them make comparisons between present and past wars based upon the estimates which Dr. Terman gives for postponable deaths by disease. He says that it is computed "the new born child has an average money value of at least $95. The value increases to $960 by five years, $4,000 by twenty years, and drops again to $2,900 by fifty years. The minimum average loss to society from each postponable death has been elaborately figured at $1,700. Of the 1,500,000 deaths in the United States each year the combined opinion of the best medical authorities regards at least 42 per cent postponable, or 600,000. The annual loss from the cause is therefore $1,700 x 600,000, or $1,020,000,000."

According to Crammond's account as summarized by the New York *Times* Annalist, the Franco-Prussian War of 1870 cost France $3,600,000,000 counting her indemnities and indirect losses. With her annual savings of $300,000,000, as they were in 1869, it required twelve years to pay this unnecessary cost. The cost of this same war to Germany is estimated at $387,750,000. However, if the indemnities and the value of the ceded provinces are allowed, Germany realized a profit of $820,000,000.

According to Crammond's summarized accounts, the foreign trade of France was not greatly affected at first. He says, "In 1869 imports were $626,500,000 and the exports $615,000,000. Next year imports were $556,000,000, exports $572,000,000. By 1872 France's foreign trade had risen sharply. Imports amounted to $689,000,000 and exports to $735,500,000. It was in raw material that the principal shrinkage during the war occurred, while the principal decrease in exports occurred in manufactured goods.[1]

While the subject of banking and exchange is a difficult one, yet it is felt that a few fundamental facts might be pointed out to both grade and high school pupils. The teacher might show how London was the world's center of exchange, and the pound sterling the standard of exchange for at least the past one hundred and fifty years, and how a great amount of this exchange has been transferred to New York City with the American dollar as the standard. A considerable time might be devoted to the conditions of all banking concerns and the probable results of the moving of capital, international borrowing, European debts, national credit and the intricacy of international credit may be correlated with Alexander

[1] These facts regarding commerce and the above-stated actual money costs of the war, plus the economic loss from deaths, would undoubtedly give the pupils a new light on the enormous cost of war.

Hamilton's conception, and the history of the United States Bank along with our monetary history.

Geography

No one desires to detract anything from the real science of teaching geography but many do desire to vitalize the science. Too often uninteresting "cut and dried" methods are used that are far beyond the ability of the child to comprehend. Teachers will do well to consider and utilize the interests that children have at present in the movements of armies as sections of the country and cities are captured or lost,—which interests may now be wisely used in the motivation of geography. These interests of the children are great incentives for them to understand the physiography of Europe, the industries of the people, the size, wealth and location of cities and countries, the agricultural products, food-stuffs, imports, exports and so on. Many teachers are having their children collect and date newspaper and magazine maps for correlative use with their geography texts. However every grade should have the excellent inexpensive *London Times* War Maps, which are most excellent for the locating of important cities.

A little account of the history of Alsace-Lorraine and a few remarks about historic cities by the teacher, would interest and fix many facts in the minds of the children for always. Considerable time may be devoted to the study of the rivers, railroads, short land routes to the east, sea routes, why Germany and Austria-Hungary felt hampered, why certain places become centers of interest and like topics involving national interests in Asia and Africa. All these suggestive features can be taught without partisanship and without criticism from anyone.

Hygiene

The history of the hygiene of the soldier is one that appeals to every school child. It is a known fact that the present strength and lasting ability of the army consists in hygienic conditions. The whole training of a soldier is mostly hygienic in its nature, such as posture, regularity, promptness, cleanliness, a slight training for emergencies, and many like things. These the child would eagerly seek to know, if the work were properly graded according to his ability to comprehend. Comparisons of men killed in battle with those who died because of unhygienic conditions, improper treatment of wounds, etc., would be gladly read and enthusiastically reported.

The child's intense interest in the soldier's camp affords the teacher a great opportunity to teach personal and civic

sanitation. Considerable time might be spent on each of the following topics,—what determines the selection of the site of a camp (proximity to water and natural climatic protection, nature of the soil, avoidance of old camp sites and reasons, and the dryness of the site), what determines the site of a barrack and how constructed (shape and size of rooms, wash rooms, ventilation, space allotment for each soldier, and the care of the sick), tents (kinds—Sibley tents, common tents, wall tents and shelter tents, the size, shape, construction and material of each, the hospital tent, arrangement of all tents, the tent ditch and the nature of surface draining), huts, water supply, sewerage, and disposal of waste. All these phases, while intensely interesting to the pupil, would teach the highest type of hygiene and sanitation, and could be easily correlated with such series as the Gulick Hygiene Series.

The history of Army Hygiene might be taken up in story form in the grades, showing that in former times little or no attention was paid to the sick soldier by army officials. The only attention the sick or wounded soldier received was by a comrade or by women following after the battle, later by monks, and still later by humane volunteer societies and the Red Cross. The hygienic care of the well soldier was unthought of. These facts may be compared with that of the present military conceptions of the hygienic efficiency in all armies.

It is estimated in the Peninsular Campaign in Spain, 60,000 French soldiers were killed and 400,000 died of disease; in the Russian Campaign of 1812, Napoleon lost 480,000 men, mostly from cold and disease; and in his 1813 Campaign, his army of 100,000 was practically annihilated because of unsanitary conditions. Also, it is estimated that the British army lost 230 men out of every 1,000 in the Crimean War from typhoid, dysentery and other infectious diseases. The French lost 140 men out of each 1,000 and the Germans 24 in the Franco-Prussian War. In the Boer War, the English loss from disease was almost double the loss from bullets. And in the recent Japanese War, Japan lost 25 men from disease out of every 1,000. Such facts as these may impress upon the minds of children the great importance of personal and civic sanitation and the direful results of ignorance, filth and carelessness.

Some little time may be devoted to the soldiers in camp, discussing their daily life, their medical skill, the physical requirements for enlistment, the exercises and drills, the military viewpoint of hygienic care (economic and efficiency

viewpoints), the modern use of the various therapeutic vaccinations for typhoid, smallpox and many other infestious diseases, the soldiers' clothing and shoes, the recent extraordinary care of all the nations towards their soldiers' rations, with comparisons of kinds of rations and amount (Russia 4,929 calories, France 3,340 calories, England 3,292 calories, Germany 3,147 calories, and the Austrians 2,620), the transportation of food and the preparation of the same, the medical inspection of food and drink, rules and regulations regarding the time and amount of water the soldiers' drink, the soldiers' equipment (ammunition, rifle with bayonet, entrenching tool, clothing, food, accoutrements, personal necessities, etc.), and camp sanitation.

A comparison of the different kinds of bullets used by different nations according to international regulations, could be mentioned with the nature of the wounds made by the so-called "humane bullets." The matter of burial may also be taken up along with what determines the site of the field hospital and the specific preparation made by the army's medical staff for the calculated number of killed and wounded soldiers. Many superintendents emphasize this phase of hygienic teaching; yet little or no emphasis should be placed upon it.

Eugenics

It is felt that a great mistake is made by most public schoolmen regarding their attitude toward eugenics in the schools. Without doubt the schools are the pathway of approach to society. The early training, character and ideals of society are shaped and moulded very largely by the schools. If through eugenic selection it is conceived that a superior generation is possible, a place must be determined for this teaching. President Hall says "from the first moment after birth, Nature begins to prepare the infant for future parenthood and all else is secondary and tributary to this."

Few superintendents concede, and justly so, that the term "eugenics" should be used in the schools, but, according to the age and comprehension of pupils, certain explanatory lessons may be given and the personal moral responsibility of children developed. This can be greatly emphasized in nature study and agriculture in the grades, and in biology in the high school. Surely the human being is no less important than the studied seeds which the pupil studies and selects for planting.

President Hall says that the teaching of eugenics "broadens the historic sense by showing the individual's relations to both his ancestors and to posterity, and inculcates the sacred-

ness of the immortality of the germ-plasm which must be served as a center of supreme interest in all human affairs." He further states that statistics show how many children would have been born to these seven to ten million men had they stayed at home. Thus, the number of the best children, the world's greatest asset for national and cultural prosperity, has been greatly reduced. Furthermore, medical studies show the nervous and physical deterioration of those who survive the war and its effect upon parenthood.

A fitting conclusion to this discussion of one of the greatest pedagogical problems that the educational world has ever encountered and which will cause educational methods and many school subjects to undergo a new evaluation, is briefly made in the following quotation from President Hall,—" the war and its lessons can be taught without offense and it is a pedagogic blunder which is sometimes worse than a crime to exclude a topic so quickening to intelligence, so rich in matter for which every youthful mind hungers, and which affords such an unparalleled opportunity to teach toleration and agreement to differ, which is about the best thing our country stands for and which gives us all a new glow of pride in it as now in a new sense standing forth as the best in the world. And best of all it is an opportunity, such as never yet came to schools, to teach the lesson of peace, which is now coming to be the world's supremest blessing and need, which is the thing that the world is coming to long for with greater ardor every day the war lasts, and which, if we now teach how to lay to heart these precious lessons, will, when it does come in the wave of inevitable great reaction, be, as the world has for two thousand years prayed it might be, perpetual and eternal."

ARISTOTLE'S THEORY OF ART—A SKETCH

By Austin S. Garver

The better to get Aristotle's point of view and to understand the problem he set himself, we must remember the stage of Greek culture in his time. His date is the middle of the 4th century, B. C. (384-322). There was just closing behind him the greatest period of Greek culture and civilization. His life almost touched that of Socrates. He was the pupil and companion of Plato during the last twenty years of the life of that philosopher (368-348), and during the best years of his own life (from his 16th to 36th year).

In literature the great age lay immediately behind him. Sophocles and Euripides were only twenty years in their graves, and Aeschylus was as near to him as Abraham Lincoln is to us. He was enveloped by their living influence.

Sculpture had just passed its zenith. The Parthenon with its decorations by Phidias and his school, was still fresh, and gleamed over the city as the source of its greatest pride and glory. Names of great painters too appear, such as Polygnotus and Zeuxis, the former of whom had decorated the porch of the Parthenon with celebrated paintings.

That marvelous fifth century B. C. witnessed the highest triumphs of the Greek genius in every field of the creative imagination. In its scope and the quality of its achievement, there is nothing to be compared to it in history.

When Aristotle appeared it was past indeed, but its glory was still fresh. All this is worth recalling for the sake of seeing how favorable was the time for a general survey and summing up of this past experience. It is also of value as making clear to us what Aristotle set out to do. His was a keenly analytic mind. He had little interest in abstract discussions. His method was that of the scientist, to interrogate the facts and ascertain the truths to be drawn from them. His wide-ranging mind touched every field of human interest, and his writings are but the report of his observations and conclusions.

It was so in the field of art. He starts from the concrete facts. All the splendid fifth century achievement lies open before him. He appreciates its power and its charm. He

asks himself, what is the secret of its power and its charm. This is the question for which he seeks an answer, and in a way it is a simple question. We must not look upon him as the spinner of an abstract theory of aesthetics. He begins his inquiry at the other end. Here is a poem, a statue, a painting, why does it give us such delight, wherein does its greatness consist, and what is the cause of the powerful impression it produces? He studies the concrete example for the purpose of extracting the principle underlying and inherent in it. It is a modest, scientific way of going at the problem, and never was there a more auspicious time, or a mind so competent for such an inquiry.

Furthermore, in the Greek practice there was no such separation of art and artists as has created so much confusion in later times. There were many varieties of beautiful things, vases and other common domestic utensils, little figurines for children or graves, potters' work, and painters' work, and stone-carvers' work and builders' work, and the work of the physician and the teacher and the poet and the statesman;—one star differs from another star in glory, but they all together form one galaxy. Perhaps galaxy is too brilliant a word; company would be nearer the Greek idea. It would seem that the artist was not highly esteemed. Certainly he was not set apart as a class, much less a distinguished class. Our use of language would have been incomprehensible to a Greek. He would understand if you spoke of workmen in this or that material, in marble or clay or wood or bronze or color or even in language. The word "maker" would have been intelligible to him, but in his logical mind all "makers" would belong together, and the only distinction between them would be that of good and bad, and not at all that of the material in which they worked. Art naturally splits up into innumerable forms according to its object, its medium and its mode of expression, but the principle that unites all these forms is one and indivisible, and that is to be found in a relation to nature.

This large simplicity of view is shared by Aristotle. He knows nothing, for instance, of two distinct realms known as the fine and the useful arts. He distinguishes between them, it is true, but he never separates them. There are degrees of eminence which he recognizes, but there is no exclusion of any humble member from the family circle.

His all inclusive statement is that "art imitates nature," and whatever, high or low, comes within the scope of that definition as he interprets it, is art. As a matter of fact, he does bring within it pretty much all that man does, as daily

workman, as moral agent, as a political animal, or as a worshipper of the gods. Art, as revealed in the things that please and satisfy the instructed and fully developed man, is thus in one view a criticism of life and an approach to its innermost meaning.

The brief and somewhat fragmentary treatise on poetry contains his chief discussion of the subject. There are frequent references to it in his other works, but they are for the most part in the nature of casual observations. His completest statement is in the "Poetry," but even there it is far from complete. The work itself is imperfect, and, as the name implies, is concerned mainly with the Art of Poetry and especially with tragedy. But all the arts are included, with more or less particular mention, and united under one general principle.

Aristotle employs two great cardinal terms, which are central in his whole discussion, and which are as vital and significant now as when he first adopted and expanded them. The one is *κάθαρσις*, cleansing, to denote the effect of art, especially of tragedy; and with this I am not concerned in this paper; the other, no less pregnant with meaning, is *μίμησις*, imitation, to denote the origin or originating principle of all art, which I would attempt summarily to discuss.

At the very beginning of his work Aristotle states his thesis in these words: "Epic poetry and Tragedy, Comedy also and Dithyrambic poetry, and the music of the flute and of the lyre in most of their forms, are all in their general conception modes of imitation." In these arts the imitation is produced by rhythm, language and harmony. This is his general statement, but his thought is not limited to the subjects mentioned, for in the immediate context he speaks of those who imitate objects through the medium of color and form and the voice, referring to the arts of painting, sculpture and song. The point emphasized is that while *μίμησις* is the mark of every kind of Art, it must necessarily vary with the objects to be represented, the medium used and the mode of expression. For instance, in poetry the effect is produced by language and rhythm, in music by rhythm and harmony, and in dancing by rhythm alone, for character and emotion can be portrayed in all these ways. It is no narrow mechanical theory he has in mind; it is a view that takes into account the varied wonder of the whole world of art. It is based on the universal instinct of imitation, through whose exercise man learns his earliest lessons and experiences the liveliest pleasures. On this conception the foundation of art is as broad and deep as the nature of man and the nature of things.

Aristotle further illustrates the meaning and scope of artistic imitation, in what he says about imitating men in action. They are to be represented not merely as men, but as men possessed of certain qualities. There are higher and lower types. The artist's task is determined by these differences. He may represent men either as they are in actual life, or as worse than they are, which is the case in Comedy, or as better than they are, as is done by Homer, Polygnotus and Sophocles. The "better," as the cited exemplars would seem to show, is to be taken not strictly in a moral, but in an ideal sense, as meaning the nobler type moving in a field appropriate to it; an Antigone it might be, or fleet Achilles, or Orestes, or Othello. The artist is not confined to a single type, nor to a perfect type in his work. He may represent what he will, but his success and rank will depend less upon his subject than upon the idea by which his purpose is directed. Even when the subject is imperfect, it may be shown in its "better" and truer being, not by the exclusion of the imperfection, but by treating it as a constituent part of a nobler whole. The character is made whole and complete, and at the same time kept true to life by the artistic intention. This is the way any good man might regard his moral failings. In this way Achilles is portrayed by Homer.

Throughout Aristotle's whole discussion of Art, a certain conception of nature, the object of imitation, is implicit. In Plato, God is the divine artist; the idea is a familiar one in Greek thought, and the universe as declaring the divine intention is a divine poem, not yet completed. Aristotle discovers this intention in nature and feels no need of going back of what he finds there. Without going into detail, nature is something more than its material part; in its essence it is a purpose, an urgency towards a goal, a struggle with rebellious matter, a creative force working towards a more perfect end than is yet visible except to the discerning mind. The artist follows this inner tendency of nature, and in the mimic world which he builds, he brings it to completion.

This principle is seen to hold even in the useful arts. Modern medicine has made us familiar with the idea of the deeper self which makes for wholeness and happiness; below all surface symptoms are these old life currents, moving ever in the direction of health. But this movement may be checked or diverted so that the end which nature has in view is not reached and we are sick. Now the art of the physician will consist mainly in his co-operation with the intention of nature, by removing the obstructions caused by fears and worries as well as physical defect, which prevent her free operation. The

best the physician can do is to give nature a chance and free her hand. For nature cannot realize her latent powers, unless she has suitable materials to work with, and the things that clog her steps are overcome. So it is that the art of the gardener aids the effort of the soil to produce plant life. So with all the practical arts. Even on these lower levels there is a certain μίμησις in man's struggle to supply his needs. Thus the escape of steam from a teakettle might suggest to the imaginative mind of a Watt an idea that would recreate the world. Such intimations are to be found everywhere. Nature gives the flint, art sharpens the edge and then proceeds to create the perfect tool. Nature furnishes the shelter of a cave, art isolates the cave, inserts windows and constructs a house. Nature makes a little hollow in the soft clay and fills it with water, art lifts the rude cup out of the detaining mass and places it in the hand after shaping it for a hundred uses.

In the higher ranges of art this fundamental principle is more clearly seen. Where the object of imitation is a definite object or a particular character, the work of the artist is not merely or mainly to hold the mirror up to nature to get a reflection of it in its actual appearance; for, as has been stated, there is more to nature than sense can report. It is an energy as well as an appearance and it does not work in vain. There is something here akin to our thought of evolution. Nature has an end in view which is "better" than the present reality. And this imminent intention of nature, which is perceived by the mind, becomes the "true idea" or ideal which is the object of the highest artistic imitation. It is the artist's privilege, therefore, and his greatest achievement to imitate things not as they are, but as they ought to be "according to a true idea."

The best instances of this are to be seen in the representations of character in the drama. A briefer illustration will serve to make the point clear. In painting a horse, the artist may paint the individual before him down to the minutest particular like a Preraphaelite, resulting in a more or less faithful copy; or dissatisfied with a bare realism he may veer to the other extreme and give you a fanciful picture which the foolish will call an ideal horse. But if he have the discerning mind he will proceed from the idea formed there of the horse in his essential attributes, and will do what Donatello did in his Gattemalata, or Phidias on the frieze of the Parthenon. There you have the immortal breed, real but not literal, only clothed with the highest reality.

When, therefore, Aristotle declares that art is the μίμησις or imitation of nature, he is far from meaning that the artist

is a copyist or mimic as our equivalent English term might seem to imply. Taking as his starting point the impressions and suggestions of nature, he forms an ideal towards which they point and in which their law is fulfilled; and his function is to give this ideal its fullest possible expression. From these sense impressions, as Shelley says,

"create he can
Forms more real than living Man,
Nurslings of Immortality."

Better than further exposition, let me cite a modern instance described in the recent volume "Artist and Public," by the eminent critic and painter, Kenyon Cox. He is considering Millet's famous "Sower" in the Metropolitan Museum, a work as simple, severe and intellectual as the classic examples which Aristotle analyzed; and exhibits the qualities on which he laid emphasis. It has the special interest that in it we catch a supreme artist at work, and can observe his method. One can imagine what an ordinary painter would do with such a subject —the pleasant field with its many interesting details, the peasant dressed for the occasion so as to be presentable and attractive: a picture more or less pleasing, more or less faithful to a given model of a man sowing.

Many of Millet's preliminary drawings and studies exist, and it is possible to trace the process by which the final result was arrived at. The everyday incident was his starting-point. It was there his imitation began, but it did not stop there. The idea in passing through his mind took on a larger significance. "At first we have merely a peasant sowing grain. Gradually the background is cut down, the space restricted, the figure enlarged until it fills its frame as a metope of the Parthenon is filled. The gesture is ever enlarged and given more sweep and majesty, the silhouette is simplified and divested of all accidental or insignificant detail. A thousand previous observations are compared and resumed in one general and comprehensive formula, and the typical has been evolved from the actual. We have no longer a man sowing, but 'The Sower,' justifying the title he instinctively gave it by its air of permanence, of inevitability, of universality. All the significance which there is or ever has been for mankind in that primeval action of sowing the seed is crystallized into its necessary expression." Millet starting from the actual, but never content with the shows of things, penetrates deeper till he reaches the essential and universal. That is the supreme mark of all his work. Both in the simpler and grander scenes, he creates great and inevitable types of what Aristotle calls the highest object of imitation—"men in action."

Such an illustration brings us very near to the heart of Aristotle's doctrine of μίμησις. It shows us how profound is the meaning of the term, and helps us to understand that "imitative art in its highest form is the expression of the universal element in human life."

We see then what the ideal would mean in this view of fine art. It is not something opposed to the real, or something better and prettier than the real, like the sentimental Madonnas of Guido Reni, or the sleek figures that not long ago passed for praiseworthy sculpture. The ideal is the real carried out to its full conclusion; it is the form which the ideas that are never completely manifest in the original, would naturally take if hindering conditions were removed. It is the representation of things, actions, passions, character in a word, "as they ought to be," and this "ought to be" is discovered by the intellectual divination of what is natural and necessary in the given circumstances. The artist is the maker, and it is his business to make man after the image of his own creative mind, to body him forth in his essential being, stripped of the disguise of what is temporary and accidental, until the *real* man, not transformed or "idealized," but liberated, alone is left for contemplation. That is why the artistic spectacle of life is so much more powerful to awaken emotion than any actual scene. It is a consistent, simplified whole, kept true to reality by the principle of imitation, yet unified, controlled and interpreted by the logical understanding. That is the ideal, the supreme achievement of the human mind, and the product of the highest creative genius.

It is never out of order to recall the clear and sane teaching of one whom Dante calls "the master of those who know;" especially in a time when the lights seem to have gone out, and art has become an experiment, and its secret is so often sought in fancies and schemes and formulas. It is well to be reminded on such authority that in its vast scope and variety, art in its fundamental meaning is one, not divisible except in a model way into the two unrelated departments of the fine and useful. The neglect of Aristotle's wholesome teaching has had a tendency to give us a denatured art, and has made so much modern criticism a dialect for studios and exhibitions, and much modern practice so full of vagaries, and so scornful of guiding principles.

We need not conclude that Aristotle has given the final and complete theory of art; important phases of the subject did not appear till long after his day. But he has left a body of doctrine of such value that it can never be forgotten or neglected without grievous loss. He died long ago, but his word is still

modern. All the great art since his day has been based on the principles then first clearly stated. Consciously or unconsciously, the great workers in art have obeyed the law, of which, if he was not the first discoverer, he was the first scientific investigator and interpreter.

THE DEVELOPMENT OF A CHILD'S VOCABULARY IN RELATION TO ENVIRONMENT

By Margaret Morse Nice, Norman, Oklahoma

How does environment influence a child's vocabulary? Where does he get his words, from indoor or from outdoor surroundings, from personal experiences or wider relations, from real life or from stories? What are the most important factors in his life when he first begins to talk and each succeeding year? Finally, what can we discover about a child's mental development from his vocabulary?

In this paper I have attempted to work out answers to these problems in regard to one child, E, our eldest daughter.

The Learning of Language

In teaching our child the English language, we talked to her as to an adult except that our words were simple and concrete. In general our practice has been not to correct her mistakes, trusting to the force of good example. As much as possible we have tried to have her words stand for real things; for instance, we took her to see pigs and bears and skunks, so that she would not get her conceptions merely from stories, pictures and toys. Finally we make an effort to avoid the dead level of too simple language by at times dealing with familiar situations in new words.

E said her first words in her 14th month—"Mamma," "Bapa" (Papa), and "Ba! ba! ba!" in imitation of the dog's bark. She added one word in her 15th month, "Bah"—for what the sheep says; and eight in her 16th month—"Book," "see," "bru" (bread), "bu" (bird), "No, no," the name of a doll; and three more animal sounds. Her words designated specific things, she did not use one word for many concepts. At the end of her 18th month she had 145 words in her vocabulary. She then began to use sentences of two words "Look here," and "Kiss fowg" (frog),—both imperative. The next month she used sentences of three words—as "Betty kiss baby," and of four and five words in her 20th and 21st month. She never inverted the word order in her sentences. Personal pronouns first appeared in the 22d month, "my," "I," and "you" respectively. "My toe peek out";

"My toe happy." "I see goat." I have no record of the appearance of the other pronouns. "We" was the last to be used — in her 33rd month. In her 23rd month a representative sentence was, "Baby so happy bidy (spider) come back again."

Up to this time her speech was lacking in many minor refinements. She used no form of the verb "to be," she did not inflect verbs, she omitted conjunctions, most prepositions and both articles. She could say what she wanted to, but she said it crudely.

She then went to visit her grandmother and had as her constant companion her boy cousin — a year older than she. Her rapid improvement in speech may have been partly due to his influence. In three months, by the time she was twenty-six months old, her English was established. She inflected her verbs, adding "s" to the singular of the present tense, she formed the past tense and past participles by adding "ed" and the present participles by adding "in'"; she used conjunctions, prepositions and the article "a." Of course she made many mistakes, and still does at the age of four; but there is a great difference between the "baby language" before she was two and the established "child language" shortly afterwards.

The Environments

Words may have very different concepts behind them according to one's experience. A child who gets his language mainly from conversation with his elders, from playing with toys or looking at books and listening to stories has a less vivid foundation for his words than the child who lives with realities, with animals, plants and other children and has an opportunity to do things himself.

In order to judge a child's vocabulary one should know the child's environment. How much reality is there in it, how much chance for the child to learn through experience? How much actual contact is there with other children and with nature? What is there in the way of cultural stimulus?

At the age of eighteen months, E lived on the outskirts of Cambridge, Massachusetts, so that her environment was approximately that of a village. The season was winter. She was the only child in the family, but four days a week she played with two boys, one two and a half years old, the other five. She saw many animals, cats, dogs, cows, horses, and especially liked to watch hens. As a pet she had a frog which she chased over the floor and when she had caught it carried about in her hand. She was fond of her toys. She loved

picture books, especially those with colored pictures of animals and flowers.

When she was three years old she lived near the centre of Cambridge, so that her environment was that of a city, yet she had a large yard to play in. For companionship she had her baby sister seven months old, and three afternoons a week a four-year-old boy visited her. It was June and she gathered flowers and watched hens and ants and English sparrows. We took her to the circus and to several parks so that she could see the animals she had heard about. Her pets were two gold fish, a snail and a pollywog. She played comparatively little with toys or dolls. Her cultural stimulus consisted of picture books, Beatrix Potter stories, fairy stories and Mother Goose.

From the age of three to four E has lived in a small town in Oklahoma — a village environment. Child companionship has been well supplied by a little Montessori Nature Study School at her home in the mornings, and by many other children of her age and older who come to play with her. She has had a great interest in flowers, learning the names of all that she found. She had a garden of her own and planted, weeded and gathered products from the family garden. For pets, she has had rabbits, hens, chickens, turtles, horned toads, frogs, toads, tadpoles, salamanders, snails, caterpillars, and crawfish. She cared very little for toys or dolls. She has not been taught to read and does not know a single letter. She has been told nature stories and poems of Bláke, Field and Rossetti. She likes to study pictures and asks many questions about them. From her 42nd to her 47th month she invented stories in which animals did the most interesting things she herself had done.

The Vocabularies

The 18th month vocabulary was obtained by keeping a record of all the words used up to that time. The three-year-old vocabulary was taken for one month before the child's birthday. A record was kept of every new word she was heard to say within that time. A few words were obtained by asking sentences which would involve the use of the words it was thought she knew. As I was almost constantly with her, her three-year-old list probably represents well her working vocabulary.

It is much harder to get a four-year-old child's vocabulary, they know so many words which they do not have occasion to use during the time under observation. I kept a partial record of E's vocabulary from her 45th month to her 47th, and during the 48th month a complete record of everything new

that I heard her say. In this way I have her vocabulary in Oklahoma, on the journey east and in Massachusetts. A number of words, perhaps twenty, were obtained by pointing to an object and asking her, "What is this?" She had no idea that her words were being taken down. The recorded vocabulary at four years does not do her full justice.

What we want to know in a child's vocabulary is how many different words that child knows and uses. I have not included inflections of words except where they are from different stems as "am-was-been," "go-went," "good-best." This excludes from the list irregular plurals of nouns and the inflections of most verbs. It is misleading to include past tenses and present participles in the vocabulary of any child who can form them well. As some three-year-olds do not yet inflect their verbs, it should be noted whether or not they do, but the vocabularies need not be inflated.* I have tried to include only words of which the child had a fair conception of the meaning. Words that are listed as "obtained from stories" are not those that she sings over to herself without necessarily comprehending them, but only those which she adopts into her play or conversation. I have counted proper names, because they help to indicate the development of the vocabulary.

The Vocabularies at 18 Months, 3 Years and 4 Years

Under each subject the words used at eighteen months are first given, then the new words learned in the third year and finally the new four-year words. Thus her three-year-old vocabulary includes the one and a half-year words, and the four-year-old vocabulary includes all the words for the three ages except those in brackets as "[hurdy-gurdy]." The words are first written as they were pronounced; if that is incorrect the correct pronunciation is given in parenthesis as "ee (ear)." If the pronunciation is changed in the next vocabulary, the word is repeated in italics so as to show that it is not a new word, but only an advance in pronunciation.

"N. W." means "New Words"; "T. W." means "Total Words."

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* Mateer,[6] Whipple,[11] Heilig,[5] and Bush[3] include everything in their vocabularies, past and present participles of verbs, proper nouns and inflections of adjectives. The Rowes[10] list past and present participles of verbs for their 4- and 6-year-old boy, but do not include numerals and proper nouns in the detailed vocabularies. Gale,[4] Pelsma,[9] and Boyd[1] exclude participial forms of verbs and other inflected forms. The first two omit proper names; Boyd apparently includes them.

Nouns

1½, 114; 3, 691; 4, 1080.

I. *Personal Experiences.*

1½, 46; 3, 231; 4, 294.

1. Body

1½: T. W.= 11.

Ee' (ear), eye, finny (finger), foo' (foot), hai' (hair), han' (hand), hea' (head), knee, mou' (mouth), noi' (nose), toey (toe).

3: N. W. = 20, T. W. = 31.

Arm, bones, cheek, chin, curls, *ear,* face, *finger, foot,* forehead, *hair, hand, head,* heart, heel, lap, leg, lip, *mouf,* (mouth), nail, neck, *nose,* shoulders, teeth, throat, sumb (thumb), *toe,* tongue, tummy.

4: N. W. = 8; T. W. = 39.

Back, b'ood (blood), brain, lungs, moocous (mucous), 'gin (skin), 'gull (skull), voice.

1a. Health.

3: T. W. = 8.

Alcohol, bite, castor oil, cold, en'ma (enema), olive oil, s'iver (sliver), witch hazel.

4: N. W. = 8, T. W. = 16.

Bacteria, disease, *enema,* measles, mumps, poison, 'gab (scab), tummy ache, vaccination.

2. Clothes.

1½: T. W. = 9.

Bunnee (button), coa' (coat), didy, hat, minny (mitten), pin, poda (pocket), shoe, 'po' (spot).

3: N. W. = 32; T. W. = 41.

Apwun (apron), band, belt, buckle, button hook, *buttons,* chain, c'othes (clothes), *coat,* collar, dwawers (drawers), dwess (dress), garter, handkerchief, hooks, leggins, *mittens,* nightgown, overalls, *pocket,* wibbin (ribbon), womper (romper), wubbers (rubbers), safety pin, sandles, shirt, shoes, skirt, s'eepin' bag (sleeping bag), s'ippers (slippers), 'dockin' (stocking), fweater (sweater), wapper (wrapper). Hole, *'bot* (spot), 'dain (stain), tear.

4: N. W. = 3; T. W. = 44.

Material, socks, sunbonnet.

2a. Toilet.

1½: T. W. = 3.
Ba' (bath), comb, soa' (soap).

3: N. W. = 7; T. W. = 10.
Bath, bwush (brush), cotton, powder, *soap,* tangle, toothbrush, toothpowder, towel.

4: N. W. = 1; T. W. = 11.
'narl (snarl).

3. Food.

1½: T. W. = 6.
Bru' (bread), mu' (milk), o' ju' (orange juice), tado (potato), sa' (salt), water.

3: N. W. = 50; T. W. = 56.
Apple, apple-sauce, bacon, banana, beets, berries, biscuit, *bread,* broth, bun, butter, cake, carrots, cheese, cherries, chocolate, coffee, corn, corn bread, corn f'akes (corn flakes), swacker (cracker), cweam (cream), Cweam of Wheat (Cream of Wheat), cwumb (crumb), cwust (crust), doughnuts, dwink (drink), egg , gwaham-cwackers (graham crackers), gwapes (grapes), ice cweam (ice cream), juice, junket, maca'oni (macaroni), meat, *milk,* nut, oatmeal , owange (orange), peach, peanut, pear, peas, *tato* (potato), pud-din', pumpkin, waspberry (raspberry), wice (rice), *salt,* soup, 'drawberry (strawberry), sugar, tapioca, tea, toast.

4: N. W. = 9; T. W. = 65.
Beans, cereal, cookies, food, jelly, lettuce, onions, *potato,* prunes, radish.

3a. Eating.

1½: T. W. = 3.
Bee (bib), di' (dish), boon (spoon).

3: N. W. = 17; T. W. = 20.
Bell, *bib,* bweakfast (breakfast), cwack (crack), cup, dinner, dinin' table, dinin' woom (dining room), *dish,* fork, knife, lunch, napkin, pitcher, p'ate (plate), supper, table c'oth (cloth), tea-kettle, tway (tray).

4: N. W. = 4. T. W. = 24.
Bowl, desert, meal, nibble.

4. Play and occupations.

1½: T. W. = 14.

B'ock (block), boa' (boat), book, bo' (box), car' (card), dar (jar), papy (paper), 'dick (stick), 2 dolls [2 dolls, 2 animals].

3: N. W. = 48, T. W. = 58.

Ball, balloon, bang, bank, beads, *box,* bubbles, cans, *card,* cart, catalog, c'othespins (clothespins), cwayons (crayons), dance, doll, drum, game, *jar,* magazine, moosic (music), noise, page, pail, paints, paper, peg, pencil, penny, picture, poem, postcard, pwesent (present), wace (race), wattle (rattle), sandpile, shovel, s'ed (sled), song, 'bool (spool), 'dring (string), 'dory (story), tower, toys, tweasure (treasure), valentine, wagon, wheel, wheelbarrow, words, 1 animal, [1 animal].

4: N. W. = 28, T. W. = 85.

Bar, b'ack board (blackboard), buttonin' frames, captain, circle, creature, croquet, cylinders, exercises, insets, leader, letters, line, map, mark, p'asticine (plasticine), pole, powession (procession), 'gool (school), see-saw, slide, soap-bubbles, 'gware (square), swing, tag, Teddy bear, triangle, tricks.

4a. Experiences.

3: T. W. = 7.

Dweam (dream), hug, kiss, nap, west (rest), shadow, s'eep, (sleep).

4: N. W. = 3; T. W. = 10.

Journey, picnic, trip.

II. *Indoor Environment.*

1½, 14; 3, 123; 4, 149.

1. House and Furnishings.

1½: T. W. = 12.

Ba' (bathtub), be' (bed), cedy (cellar), chair, c'o (clock), coal, door, fwoy (floor), house, key, 'ight (light), tado (table).

3: N. W. = 95; T. W. = 107.

Ashes, basin, basket, bathwoom (bathroom), bath tub, *bed,* bedwoom (bedroom), b'anket (blanket), book case, bottle, bwoom (broom),

bureau, candle, candle-dick (candle-stick), ceilin', *cellar,* chamber, chest, chimney, *c'ock* (clock), c'oset (closet), c'oth (cloth), cork, couch, cwib (crib), curtain, cushion, desk, dwawer (drawer), dust, duster, envelope, fire, fire-p'ace (fire-place), *floor,* furnace, gas, g'ass (glass), g'ue (glue), hall, hammer, hammock, hamper, handle, hanger, heater, high chair, home, ink, lamp, *light,* lookin' g'ass (looking glass), mantle piece, match, mirror, nail, needle, noospaper (newspaper), oven, pan, parlor, pen, pimamo (piano), pillow, pipe, post, woof, (roof), woom (room), wope (rope), wug (rug), scissors, 'green (screen), 'grew (screw), sewin' machine, shades, sheet, shelf, sideboard, sofa, 'dairs (stairs), 'damp (stamp), 'drap (strap), 'dove (stove), *table,* telephone, simble (thimble), thread, twunk (trunk), tub, typewriter, onbrella (umbrella), wandah (verandah), wall, wall paper, wash 'dand (wash stand), waste basket, weighin' machine, window, wire, wood.

4: N. W. = 22; T. W. = 127.

Axe, bench, board, bundle, cupboard, electricity, f'ames (flames), mop, package, pantry, *piano,* porch, refrigerator, register, rockin' chair, saw, s'eepin' porch (sleeping porch), 'dopper (stopper), 'dudy (study), suit case, tank, tools, varnish.

2. Others' Belongings.

1½: T. W. = 2.

Ba' (bag), mu' (muff).

3: N. W. = 14; T. W. = 16.

Bag, camera, fan, g'asses (glasses), g'oves (gloves), hairpin, hatpin, ladder (lather), money, *muff,* necktie, purse, sack, abenders (suspenders), trousers, watch.

4: N. W. = 6; T. W. = 22.

Bracelet, film, overcoat, revolver, suit, trimmin'.

III. *Outdoor Environment.*

1½, 26; 3, 199; 4, 283.

1½: T. W. = 5.

Baul (barrel), car, go-car' (go-cart), sleigha (sleigh), too-too (choo-choo).

3: N. W. = 42; T. W. =47.
[Arch], autobile (automobile), barn, *barrel,* bicycle, bonfire, buildin', cawwaige (carriage), church, circus, engine, factory, fair, farm, fence, field, f'ag (flag), gate, *go-cart,* [Harvard 'quare (square)], [Harvard 'dreet (street)], [hurdy-gurdy], labwotory (laboratory), mail-box, path, woad (road), woller 'gates (roller skates), sail boat, seat, *sleigh,* 'moke (smoke), 'dation (station), 'deam boat (steam boat), 'deam engine (steam engine), 'dore (store), subway, ticket, twack (track), *twain,* (train), twolley-car (trolley-car), tunnel, waterin' cart, lard (yard).

4: N. W. =36; T. W. = 79.
Baggage-car, bran, bridge, bridle, bungalow, dinin' car, Elm dreet (street), fire-engine, fire-works, flytrap, fountain, garage, garden-house, grain, grind 'done (grind stone), gun, hay, headlight, henhouse, kite, mail, observation-car, parade, reins, roadside, runabout, saddle, 'gare-crow (scare crow), sidewalk, 'moker (smoker), deeple (steeple), teams, trap, luniversity (university), whip, woodshed.

1a. Geography.

3: N. W. = 10.
City, country, town. 5 towns, 1 state, 1 country.

4: N. W. = 13; T. W. = 23.
Countries, 'date (state), village, world. 5 towns, 3 states, 1 country.

2. Sky and Landscape.

1½: T. W. = 3.
Moo' (moon), 'gy (sky), 'now (snow).

3: N. W. = 26; T. W. = 29.
Air, bank, c'ouds (clouds), dirt, ground, hill, ice, lake, *moon,* mountain, mud, ocean, pond, puddle, wain (rain), wiver (river), wock (rock), sand, shade, 'bring (spring), 'dars (stars), sun, sunshine, sunder (thunder), valley, weather, wind.

4; N. W. = 14; T. W. = 43.
Brook, island, lightnin', pool, rain-bow, sea, shower, 'dones (stones), 'dorm (storm), 'dream (stream), sunset, Venus, waves, whirl.

3. Plants.

1½: T. W. = 2.

F'ower (flower), g'ass (grass).

3: N. W. = 21; T. W. = 23.

Bark, buttercup, daffodil, daisy, dandelion, fern, f'owerpot (flowerpot), *gwass* (grass), gwove (grove), lilac, leaf, log, oakball, oaks, p'ant (plant), pollen, wagweed (ragweed), wose (rose), seed, sorns (thorns), twee (tree), violet.

4: N. W. = 57; T. W. = 80.

Acorn, acorncups, anemone, apple tree, b'ossom (blossom), b'ue-berry (blue-berry), b'ue-eyed grass, b'uets (bluets), branches, briar, bud, bushes, cabbages, chickweed, c'over (clover), column flower, coreopsis, corn, currants, evenin' primrose, f'eabane (flea-bane), forget-me-not, four-o'clock, garden, gooseberries, gourds, grapevine, horse-nettle, lily, moss, mustard, neckweed, Nothoscordum, peach tree, pear tree, pepper-grass, pine, pine-cone, pine-needle, poison ivy, poppy, poppy mallow, root, shepherd's purse, 'bring booty (spring beauty), 'dem (stem), sumach, sweet peas, sistle (thistle), toad f'ax (toadflax), Venus' lookin' glass, vine, weeds, wheat, woods, wood sorrel, yellow puccoon.

4. Animals.

a. Insects.

3: T. W. = 10.

Ant, bee, beetle, bug, bumblebee, butter f'y, caterpillar, f'ies (flies), mogito (mosquito), wasp.

4: N. W. = 19; T. W. = 29.

Cockroach, cricket, cutworm, drone, f'ea, (flea), grass-hopper, grub, honeybee, insect, ladybug, moss (moth), p'ant lice (plant lice), queen bee, walkin' dick (walking-stick), worker bee. Bee-hive, buzz-buzz, honey, swarm.

b. Other Invertebrates.

3: T. W. = 3.

'Nail (snail), 'bider (spider). Shell.

4: N. W. = 6; T. W. = 9.

Angleworm, crawfish, daddy-long-legs, worm. Cobwebs, 'bider webs (spider webs).

c. Fish. Amphibians.
Reptiles.

1½: T. W. = 1.
Fwog (frog).

3: N. W. = 7; T. W. = 8.
Fish, *frog,* gold fish, pollywog, 'nake (snake), toad, turtle. Fish food.

4: N. W. = 6; T. W. = 14.
Horned toad, lizard, salamander, tadpole, terrapin. Aquarium.

d. Birds.

1½: T. W. = 5.
Bu (bird), hen, wootie (rooster). Caw-caw (what the hen says), oo-oo (what the rooster says).

3: N. W. = 22; T. W. = 27.
B'ue jay (blue jay), chickens, duck, eagle, English 'barrow (sparrow), goose, gwackle (grackle), hawk, junco, pigeons, sea-gull, fwan (swan), turkey, wood-pecker. Bill, cages, dust baths, feader (feather), gobble (what the turkey says), nest, quack, wing.

4: N. W. = 21; T. W. = 48.
Bobwhite, chewink, chicadee, cock, dickcissel, dove, ducklin', king bird, meadow lark, mockin' bird, night hawk, parrot, peacock, Phoebe, robin, whippoorwill, wren. Chicadee-dee, droppins, whistle. Friendly (a pet hen).

e. Mammals.

1½: T. W. = 9.
Cow, do' (dog), horsey, kitty, puppy. Ba! Ba! (What the dog says), moo, myow, tai' (tail).

3: N. W. = 34, T. W. = 43.
Bear, bunny, calf, camel, cat, deer, *dog,* donkey, elephant, fox, goat, *horse,* kittens, lamb, lion, monkey, mouse, oxen, pig, pussy, wabbib (rabbit), wat (rat), sheep, gunk (skunk), 'gwirrel (squirrel), tiger. Bah (what the sheep says), fur, horns, pet, *tail,* umph (what the pig says). Names of one horse, two dogs and [two dogs].

4: N. W. = 15; T. W. = 58.
Baboon, bat, Belgian hare, buffalo, bull, chipmunk, guinea pig, jack rabbit, mool (mule), pony, 'possum, racoon, sea lion. Wool, name of one cow.

IV. *People.*

1½, 12; 3, 57; 4, 85.

1½: T. W. = 12.

Baby, boy, girl, lady, Mamma, ma' (man), Papa. [four children, one adult].

3: N. W. = 50; T. W. = 57.

Aunt, bruder (brother), carpenter, child, c'own (clown), cousin, fader (father), fwiend (friend), gwandma, gwandpa, *man,* Miss, Missis, Mister, mudder (mother), people, sis'er (sister), teacher, uncle, visitors. 4 children, 6 adults; [4 children, 17 adults].

4: N. W. = 49; T. W. = 85.

Baker, cook, conductor, doctor, driver, family, fisherman, grandchildren, iceman, person, policeman, porter, son, 'dudent (student), sugar plum. 16 children, 18 adults.

V. *Words from Pictures and Stories.*

1½, 14; 3, 28; 4, 69.

Bah* (for sheep), bear,* cu'* (buttercup), fwy* (butter fly), du'* (duck), fo'* (fox), gobb* (for turkey), munye* (monkey), mou'* (mouse), owl, quack,* 'at* (rat), r'r (for lion), 'nail* (for snail), umph* (for pig).

3: N. W. = 26; T. W. = 28.

Alligator, angel, bower, boogle (bugle), China, cwown (crown), fairy, Indian, Japanese, king, lambikin, Mallard duck, market, oriole, queen, weindeer (reindeer), wobbers (robbers), thrush, wolf. 7 proper nouns.

4: N. W. = 41; T. W. = 69.

Armadillo, badger, crab, crocodile, dragon, dwarf, enemy, ferret, giants, giraffe, heaven, hedge-hog, jackal, kangaroo, porcupine, pot, shepherd, 'bider monkey (spider monkey), 'birit (spirit), tailor, unicorn, whale, wild cat, witch, zebra. 16 proper nouns.

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* These words were learned from real life by her third year, so they are to be found under the words connected with animals in the three-year-old vocabulary. They are not to be counted in this division after the 1½-year vocabulary.

VI. *Abstract, Time, Position, etc.*

1½, 2; 3, 53; 4, 100.

1. Time.

3: T. W. = 10.

Birthday, Christmas, day, minute, mornin', nighttime, o'c'ock (o'clock), 'bring (spring), time, to-day.

4. N. W. = 15; T. W. = 25.

Afternoon, age, bedtime, evenin', half-past, month, night, summer, to-morrow, to-night, week, winter, while, lear (year), lesterday (yesterday).

2. Position.

3: T. W. = 11.

Back, bottom, corner, cover, edge, end, fwont (front), middle, p'ace (place), side, top.

4: N. W. = 3; T. W. = 14.

Aginnin' (beginning), row, tippity-top.

3. Quantity.

1½: T. W. = 1.

Pieces.

3: N. W. = 6, T. W. = 7.

Bit, dwops (drops), half, inches, part, pile.

4: N. W. = 7, T. W. = 14.

Amount, lot, miles, numbers, pairs, rest, 'beck (speck).

4. Indefinite.

3: T. W. = 7.

Anybody, anysing (anything), everybody, everysing (everything), nossing (nothing), somebody, somepy (something).

4: N. W. = 1, T. W. = 8.

Nobody, *somesing* (something).

6. Abstract Nouns.

1½: T. W. = 1.

Pity.

3: N. W. = 17; T. W. = 18.

Attention, color, 'fusion (confusion), enough, fun, heat, help, joke, kind, matter, adake (mistake), name, 'mell (smell), 'duff (stuff), sing (thing), twouble (trouble), way.

4: N. W. = 21; T. W. = 39.
Account, aventures (adventures), care, fault, aparison (comparison), dryness, aberiments (experiments), feelin's, harm, help, joy, life, mind, question, self, sight, sign, sort, taste, sought (thought), work.

VERBS

1½, 10; 3, 246; 4, 380.

1½: T. W. = 10.
Cau' (caught), c'y (cry), dan' (dance), fall, gone, kiss, look, pa' (pat), see, sin' (sing).

3: N. W. = 236, T. W. = 246.
Am, amoose (amuse), answer, aren't, wang-in' (arranging), ask, bark, be, belong, bite, b'ess (bless), b'ow (blow), bodder (bother), bounce, bweak (break), bwing (bring), bwush (brush), build, bump, burn, burst, button, buy, call (cry), call (visit), can, care, carry, *catch,* change, chase, chew, c'ap (clap), c'ean (clean), c'imb (climb), comb, come, cook, cough, could, count, cover, cweep (creep), cwoss (cross), cwow (crow), *cwy* (cry), cuddle, cut, *dance,* die, dig, do, dwaw (draw), dweam (dream), dwess (dress), dwink (drink), dwop (drop), dump, dust, eat, aguse (excuse), fasten, feed, feel, fight, fill, find, fit, fix, f'y (fly), fold, gargle, get, give, g'ue (glue), *go,* gwab (grab), gwow (grow), guess, hang, happen, hatch, have, hear, help, hide, hit, hold, hook, hop, hope, howlin', hug, hunt, hurt, hurry, is, isn't, jump, keep, kick, kneel, knock, know, laugh, leak, lean, leave, let, lie (recline), lift, like, listen, live, lock, lose, mail, make, march, mark, mean, measure, meddle, mend, might, mind, mix, muss, named, need, obey, open, ought, pack, paint, paste, *pat,* gay, peek, pick, pin, pinch, p'ay (play), poke, pound, pour, pwess (press), pwick (prick), pull, push, put, wain (rain), wap (rap), weach (reach), wead (read), west (rest), wide (ride), wing (ring), wock (rock), wub (rub), wun (run), sail, save, 'gratch (scratch), see-saw, send, sew, shave, shine, shoo, show, shut, *sing,* sit, s'eep

(sleep), s'ide (slide), 'mash (smash), 'mell (smell), 'neeze (sneeze), 'now (snow), 'nuggle (snuggle), soil, 'bank (spank), 'bill (spill), 'bit (spit), 'b'ash (splash), 'gweak (squeak), 'gweeze (squeeze), 'dand (stand), 'day (stay), 'dep (step), 'dick (stick), 'ding (sting), 'dop (stop), 'duff (stuff), 'dumble (stumble), abose (suppose), fwallow (swallow), fweep (sweep), fwim (swim), take, talk, tangle, taste, tear, tell, sank (thank) sink (think), frow (throw), tickle, touch, twy (try), tumble, turn, unbuckle, undo, undwess (undress), unfasten, unlock, unwound, visit, wait, wake, walk, want, was, wash, watch, wave, wear, weigh, went, wet, whistle, wiggle, will, wind, wipe, wonder, would, wite (write), lell (yell).

4: N. W. = 134; T. W. = 380.

Acquainted, attendin', back, bake, beat, begged, believe, bend, b'ast (blast), b'eed (bleed), borrow, burried, breathe, butter, buzz, concerned, crack, crawl, crinkle, decorated, 'acided (decided), 'abise (despise), 'agusted (disgusted), drag, drip, drive, dry, dye, acourage (encourage), evaporate, explain, fishin', flap, float, forget, galop, gnaw, gobble, greet, growl, grunt, grumble, hand, harness, hate, haul, imagine, avite (invite), lay, learn, lick, light, love, manage, married, meet, moo, move, must, nail, nibble, nip, nod, order, own, peck, p'ant (plant), poison, pop, prance, atendin' (pretending), punch, punish, quarreled, raised, rattle, represent, 'member (remember), rescue, rinse, rob, roll, rush, say, 'gamper (scamper), 'grape (scrape), 'gream (scream), 'grub (scrub), 'guttle (scuttle), seem, sell, set, settle, sharpen, shook, shoot, sigh, 'gin (skin), 'gip (skip), s'ips (slips), 'niffin' (sniffiing), sound, 'brang (sprang), 'brinkle (sprinkle), 'gwashin' (squashing), 'gwirm (squirm), 'dart (start), 'dealin' (stealing), suck, suit, swell, swing, tease, tip, treat, travel, troopin', tug, twist, underdand (understand), untie, used, vaccinate, wade, warm, waste, weed, weep, whip, whisper, whoop, widder (wither), wish, work.

PRONOUNS

1½, 0; 3, 30; 4, 32.

I. *Personal.*

3: T. W. = 18.
He, her, hers, him, his, I, it, me, mine, my, myself, she, they or dey, them or dem, we, you or lou, your, yours.

4: N. W. = 2; T. W. = 20.
Our, us.

II. *Relative.*

3: T. W. = 1.
What.

III. *Interrogative.*

3: T. W. = 3.
What, which, who.

IV. *Demonstrative.*

3: T. W. = 4.
Dat or that, dese or these, dis or this, dose or those.

V. *Adjective.*

3: T. W. = 4.
All, odder (other), some, same.

ADJECTIVES

1½, 10; 3, 139; 4, 232.

I. *Article.*

3: T. W. = 1.
A.

II. *Demonstrative.*

3: T. W. = 12.
Another, any, each, every, odder (other), same, some, such, dat or that, dese or these, dis or this, dose or those.

4: N. W. = 1; T. W. = 13.
Alike.

III. *Interrogative.*

3: T. W. = 2.
What, which.

IV. *Quantitative.*

3: T. W. = 13.
All, double, foo (few), last, many, most, several. One, two, free (three), four, five, hundreds.

4: N. W. = 10; T. W. = 23.
Both, first, next, none, whole. Six, seven, eight, nine, ten.

V. *Qualitative.*

1½, 10; 3, 111; 4, 193.

A. Color.

3: T. W. = 15.
B'ack (black), b'ue (blue), brown, gold, green, owange (orange), pink, purple, wed (red), white, lellow (yellow). Bwight (bright), colored, dark, shiny.

4: N. W. = 7; T. W. = 22.
Grey, rosy, 'garlet (scarlet), tan, violet. Light, 'driped (striped).

B. Spatial.

3: T. W. = 13.
Big, far, fat, full, high, large, little, long, low, near, small, 'deep (steep), tiny.

4: N. W. = 8; T. W. = 21.
Deep, great, level, monstrous, short, thin, tall, wee-wee.

C. Sense.

1½: T. W. = 1.
Co' (Cold).

3: N. W. = 14; T. W. = 15.
Cold, cool, gweasy (greasy), hard, hot, icy, 'dicky (sticky), soppin', soft, sore, 'diff (stiff), sunny, sweet, warm, wet.

4: N. W. = 11; T. W. = 26.
Buttered, b'oody (bloody), curly, firm, heavy, moist, rough, s'ippery (slippery), 'mooth (smooth), soapy, sour.

D. General.

1½: T. W. = 9.
Cunnin', dirty, funny, goo' (good), nice, poo' (poor), pretty, s'eedy (sleepy), tire (tired).

3: N. W. = 59; T. W. = 68.
Afwaid (afraid), alone, ashamed, as'eep (asleep), adonished (astonished), awake, awful, bad, bare, best, busy, careful, c'ean (clean), c'oudy (cloudy), comforble (comfortable), [coot (cute)], dangewous (dangerous), darlin', dead, dear, unpointed (disappointed), uncouraged (discouraged), dusty, empty, fast, fine, fwiendly (friendly), g'ad (glad), *good,* happy, holey, hungwy (hungry), kind, lovely, merry, naughty, noo (new), old, open, *poor,* queer, quiet, wight (right), weady (ready), wubber (rubber), shut, sick, *s'eepy* (sleepy), s'ow (slow), sorry, south, aprised (surprised), 'dupid (stupid), tender, terrible, sirsty (thirsty), tight, *tired,* wide open, windy, wong (wrong), withered.

4: N. W. = 57; T. W. = 124.
Alive, angry, anxious, barefoot, booful (beautiful), brass, brave, breezy, careless, cheerful, c'everest (cleverest), common, delighted, diffrunt (different), eager, early, excited, fierce, f'uffy (fluffy), gay, gentle, gwowed-up (grown-up), horny, interested, iron, jolly, late, left, live, lonely, loose, north, own, precious, prickly, prompt, proud, quick, real, rich, ripe, rotten, safe, 'gared (scared), set, silver, 'bandy (spandy), 'bendid (splendid), 'dale (stale), 'dill (still), sure, tame, west, wild, whirlin', wooden, loung (young).

ADVERBS

1½, 6; 3, 62; 4, 102.

I. *Time.*

3: T. W. = 11.
After, again, always, ever, first, never, now, once, sometimes, nen (then), where.

4: N. W. = 7; T. W. = 18.
Ago, before, finally, soon, 'dill (still), usually, let (yet).

II. *Place.*

1½: T. W. = 3.
Down, dere (there), up dar (upstairs).

3: N. W. = 19; T. W. = 22.
Along, anywhere, away, behind, downdairs

(downstairs), here, in, indoors, inside, near, next, oss (off), on, out, outdoors, outside, over, under, up, *updairs* (upstairs).

4: N. W. = 12; T. W. = 34.
Around, across, back, everywhere, far, farther, nearby, somewhere, through, underneath, upside down, way.

III. *Manner.*

3: T. W. = 13.
Carefully, exactly, horseback, how, nicely, quickly, wight (right), s'owly (slowly), so, too, togedder (together), well, why.

4: N. W. = 10; T. W. = 23.
Anyway, awfully, apparently, better, busily, fast, headfirst, promply (promptly), perferly (perfectly), terribly.

IV. *Degree.*

1½: T. W. = 1.
All.

3: N. W. = 10; T. W. = 11.
Almost, as, else, enough, just, like, more, quite, too, very.

4: N. W. = 9; T. W. = 20.
A little, either, even, mostly, much, only, pretty, rather, becially (especially).

V. *Modal.*

1½: T. W. = 2.
No, p'e' (please).

3: N. W. = 3; T. W. = 5.
Not, perhaps, *p'ease* (please), les or zes (yes).

4: N. W. = 2; T. W. = 7.
Maybe, possibly.

PREPOSITIONS

1½, 0; 3, 21; 4, 23.

3: T. W. = 21.
About, across, after, against, before, back of, behind, beside, between, by, for, from, in, of, off, on, through, to, under, up, with.

4: N. W. = 2; T. W. = 23.
Except, without.

CONJUNCTIONS

1½, 0; 3, 7; 4, 8.

3: T. W. = 7.
And, because, but, if, so, than, whedder (whether).

3: N. W. = 1; T. W. = 8.
Or.

INTERJECTIONS

1½, 5; 3, 9; 4, 13.

1½: T. W. = 5.
Bye (good-bye), mornee (good-morning), 'night (goodnight), h'llo (hello), 'owdo (howdo).

3: N. W. = 4; T. W. = 9.
Goodby, good-morning, good-night, hello, oh, ouch, peek-a-boo, why.

4: N. W. = 4; T. W. = 13.
All aboard, dear me, ha-ha-ha, well.

The Grammar of the Vocabularies.

E had 145 words in her vocabulary at eighteen months, 1205 words at three years and 1870 words at four years. All the 18-month terms are found in both the later vocabularies. Thirty-one proper nouns and three other words, "arch," "hurdy-gurdy" and "cute" she knew at three but not at four.

Table of the Parts of Speech

	Number of words			Per cent			Per cent of Increase
Age in years	1½	3	4	1½	3	4	From 3 to 4
Nouns	114	691	1080	78.6	57.2	57.6	56.3
Verbs	10	246	380	6.8	20.5	20.4	54.4
Pronouns	0	30	32	0	2.5	1.3	6.7
Adjectives	10	139	232	6.8	11.6	12.9	66.9
Adverbs	6	62	102	5.4	5.1	5.4	64.5
Prepositions	0	21	23	0	1.7	1.3	9.5
Conjunctions	0	7	8	0	0.6	0.4	14.3
Interjections	5	9	13	3.4	0.8	0.7	44.4
Total	145	1205	1870	100.	100.	100.	55.2

The proportions of the different parts of speech used by E at the three ages correspond closely to the results in other child vocabularies. The percentages of increase from her third to her fourth year are interesting. The increase in the whole vocabulary was 55 per cent; verbs and nouns show this exact proportion. She learned more new adverbs and adjectives proportionally than of any of the other parts of speech, 64.5 and 66.9 per cent respectively. Of pronouns and prepositions she added only two each to her vocabulary, and but one conjunction. At three she had mastered practically all of the prepositions and pronouns that she will ever use, and enough conjunctions to suffice her very well.

There are many words in common use among adults which E does not include in her vocabulary. Of auxiliary verbs she used "can," "could," "might," "will" and "would" at three, but "may," "shall" and "should" have not appeared in her four-year-old vocabulary. O'Shea (7) says that "'except,' 'although,' 'unless,' 'lest,' 'in order that,' 'nor,' 'whether,' 'or'" are not "employed with precision before the fifth year." E does not use "although," "unless," "lest," "in order that" or "nor" at all. She used "whether" at three, but always in connection with "if." "I don't know whedder if a crawfish got away." "Except" and "or" are used correctly by her at four. O'Shea (8) says again, "It seems for a long time children avoid the *less* and *least* and *fewer* and *fewest* constructions." E uses none of them; at 51 months she asked me what "less" meant after I had just employed the term. The only relative she uses is "what." The only article is "a," probably because "the" is hard for her to pronounce.

E has made certain improvements on the English language. She began to use "she" and "our," but at about two and a half she substituted "her" and "we'er." At 51 months she uses the correct terms about as often as these incorrect ones. She still occasionally uses "I'm are" for "I am." "More better" seems to her stronger than the conventional term. Irregular verbs give her trouble, although as a rule she does not make mistakes.

The most striking characteristics of E's baby pronunciation were clipping the beginnings and endings of words, and changing "er" to "ie." This was corrected in a few months, but the majority of mispronunciations were clung to until she was past four. Her four-year-old pronunciation was only slightly better than her two-year-old, except that in the new words she learned, she pronounced her "r's" correctly.

We did not correct her until she was 3 years and 9

Pronunciation

The way in which E mispronounced certain sounds is indicated in the following table

At 18 months	At 3 years	At 4 years	At 4 yrs. 3 mos.
ch = t, sometimes	corrected		
	ew = oo	Same	Same
	g dropped in "ing"	Same	Same
l omitted after b, c, f, p, s	Same	Corrected after c and f	Corrected entirely
r pronounced as w	Same, except medial "r"	Same, except in new words	Corrected entirely
s omitted before m and n	Same	Same	Sometimes correct
	sk changed to g	Same	Sometimes correct
sp changed to b	Same	Same	Sometimes correct
st changed to d	Same	Same	Sometimes correct
	sw = fw	Same	Corrected
	th = s or f	Same	Sometimes correct
dh = d	Sometimes d, sometimes dh	Same	Much improvement
	v = w in "very", otherwise correct	Same	Corrected
	y = l, except in "yes"="zes", "les" or "yes"	Same	Sometimes correct

months old and then I tried to induce her to improve her pronunciation. But she showed no interest in such efforts, often saying "I like to say them wong." A month later I noticed her saying "very" instead of "wery," and "radish," a new word. So I tried again and met much better success. She enjoyed the drill for a few weeks and then became bored with it. There seemed to be a time of spontaneous improvement then, at three years and ten months, when she mastered "r"s in new words, "l" after "c" and "f," and "v" in "very." Now at four years and three months she is improving again, pronouncing all "l"s, "s" before "w," all her "r"s, and if she tries "th," "dh," "sm," "sn," "sp," "sk," "st," and "y." "Ew" is about the only sound that seems beyond her.

The Content of the Vocabularies

Although in a general way all the parts of speech in the different vocabularies show mental development, none of them are as concrete and specific as the nouns. The table of nouns follows:

Table of Nouns

	Number of words			Per cent			Per cent of increase from 3 to 4
Age in years	1½	3	4	1½	3	4	
I. Personal Experiences	46	231	294	40.4	33.5	27.2	33.0
1. Body and Health	11	39	55	9.6	5.6	5.1	41.1
2. Clothes	12	51	55	10.5	7.4	5.1	7.0
3. Food	9	76	89	7.8	11.0	8.3	17.1
4. Play	14	65	95	12.3	9.6	8.6	46.0
II. Indoor Environment	14	123	149	12.2	17.7	13.9	21.3
III. Outdoor Environment	26	199	383	22.8	28.7	34.6	92.0
1. Civilization	5	56	101	4.4	8.2	9.4	80.4
2. Sky, Landscape	3	29	43	2.7	4.0	4.0	48.0
3. Plants	2	23	80	1.7	3.4	7.4	284.0
4. Animals	16	85	159	14.0	13.1	14.6	87.0
IV. People	12	57	85	10.5	8.4	7.8	49.4
V. Words from pictures and stories	14	28	69	12.3	4.0	6.5	146.4
VI. Abstract, time, position, etc	2	53	100	1.7	7.2	9.4	88.7
1. Time	0	10	25	0	1.5	2.4	150.0
2. Position	0	11	14	0	1.7	1.3	27.0
3. Quantity	1	7	14	0.85	1.0	1.3	100.0
4. Indefinite	0	7	8	0	1.0	0.8	14.3
5. Abstract	1	18	39	0.85	2.5	3.6	116.6
Total	114	691	1080	100.	100.	100.	56.3

When E was 18 months old, her personal experiences were of the most concern to her; they comprise 40 per cent of all her nouns. Of these, the parts of the body furnish 9.6 per cent of all her nouns. Clothes supply 10.5 per cent, while food and eating have a smaller representation, 7.8 per cent. Play and occupations are responsible for 12 per cent. As to the relative influence of indoor and outdoor environment, indoors contributed 12 per cent and outdoors 23 per cent. People are important to a baby—they furnish 10.5 per cent of E's nouns. Words from stories and pictures comprise 12 per cent; these are all names of animals or the sounds of animals, except one, which is the name of a flower. She used

only one abstract term "pity," and one for quantity — "pieces"; these represent 1.7 per cent.

At three years, personal experiences, although still most important to the child, had dropped to 33.5 per cent. Words denoting parts of the body decreased from 9.6 per cent to 4.5 per cent, clothes from 10.5 per cent to 7 per cent, play and occupations from 12 to 9.6 per cent. Food rose from 7.8 per cent to 11 per cent—the highest at any age. Indoor environment rose from 12 to 17.7 per cent and outdoor environment from 2.3 to 28.7 per cent. People were slightly less important, furnishing 8.4 per cent instead of 10.5 per cent. Words from stories have decreased from 12 per cent to 4.5 per cent. Abstract terms, and words for time, quantity, etc. have greatly increased — from 1.7 per cent to 7.2 per cent.

At four, E's most important interests were in outdoor environment, for they represent 35 per cent. Personal experiences have dropped to 27 per cent. Words denoting parts of the body have decreased to 3.6 per cent, but those connected with health and disease have increased. Clothes have dropped to 5 per cent, food to 8 per cent and play and occupations to 8.6 per cent. Indoor environment decreased from 17.7 per cent to 13.9 per cent. The outdoor environment of civilization increased from 8 to 9 per cent; animals from 13 to 14.6 per cent. Plants have made the greatest increase of any subject: the 7.4 per cent represents a high tide of interest in flowers which occurred just before she was four. Terms for people have decreased slightly — from 8.4 to 7.8 per cent. Words from stories rose from 4.5 to 6.4 per cent. Words for time, position, etc., and abstract words increased from 7.2 per cent to 9.4 per cent.

The column showing the increase from the third to the fourth year is illuminating. The increase of all the nouns was 56 per cent; that is, using the three-year-old vocabulary as a basis, E used 56 per cent more nouns in her fourth year than in her third.

Therefore 56 per cent is the standard of increase; if she had learned words equally from all sources there would be a regular increase of 56 per cent for each division. Let us see what was the case. Personal experiences increased 33 per cent, indoor environment 21 per cent, outdoor environment 92 per cent, people 49 per cent, stories 146 per cent and abstract, time, etc. 88.7 per cent. The subjects under personal experiences show wide variations; parts of the body increased 38 per cent, words relating to health 100 per cent, clothes only 7 per cent, food but 17 per cent, while play and occupations came near the standard with 46 per cent. Words for the

house and furnishings increased only 18.6 per cent. The outdoor environment of civilization increased 80 per cent. Geography shows a great augmentation — 130 per cent. Sky and landscape are near the standard with 48 per cent. Animals go well beyond it with 87 per cent. But the greatest increase of all is in plants — 284 per cent. Terms for time have increased 150 per cent, and quantity 100 per cent. Few words denoting position were added, only 27 per cent. All but one of the indefinite nouns were used in the three-year-old vocabulary, so they increased but 14 per cent. Abstract words increased 116 per cent.

We are now in a position to answer some of the questions with which we started. This child got her words at first largely from personal experiences and from outdoors with smaller proportions of words denoting indoor environment, and people, and words from stories. At three years personal experiences were still first, and outdoors second; indoor environment contributed more than at 18 months, but people and especially stories furnished less. At four years outdoor environment had the largest share of her nouns; personal experiences, indoor environment and people were all less important than ever before. Abstract words showed a large increase at each succeeding age.

Thus we see a decrease in the importance of personal experiences and an enlargement of horizon. By her third year E had learned most of the parts of the body that were of interest to her, the names of her clothes, of her food and the majority of the objects of her indoor environment. Therefore there was little to add in these directions. And there will be little to add in the future except as regards the parts of the body. She is now, at 51 months, asking questions about her internal workings.

It is interesting to find how much outdoors contributes to her vocabulary at every age, and how at four years it surpasses all other elements. Her outdoor environment has been wide and varied, and this is reflected in her speech. Her line of chief interest is plain—nature. She had plenty of opportunity to learn, and she had good teaching, so with her natural bent, her knowledge of animals and plants increased by leaps and bounds. Outdoor environment has limitless possibilities for her future vocabulary especially as regards nature.

Almost all of E's nouns have come from real life. At 18 months when her experience was limited, the proportion of words from stories and pictures was highest — 12 per cent; these were animal terms. At three years, by reason of her wider experience, she had learned from reality most of the

animals that she had known only at second-hand at first, so her words from stories and pictures dropped to 4 per cent. The next year she was told many stories and she had more picture books, both of which factors raised the proportion to 6.5 per cent.

One of the most evident things in the vocabularies is the indication of greater maturity at four than at three. The augmentation of geographical terms 130 per cent shows a widening horizon and the beginning of a conception of space and distance. The augmentation of nouns for quantity 100 per cent, for time 150 per cent and most important abstract terms 116 per cent — all are significant of mental development — of dawning ability to grasp abstract relations.

Boyd (2) has made a study of the words used by his daughter in 1250 sentences at the 2nd, 3rd and 4th years. "The percentage of the total words in the main groups of nouns" * * * "show a relatively increasing use of words relating to parts of the body, dress, the parts and furnishings of the house, country objects, locomotion, plants, facts of time, quantity and position, and abstract ideas; and a relatively decreasing use of words having reference to food, household articles, animals, play and occupations, people and institutions. The reason is generally not difficult to find. There is obvious in some cases the gradual widening of the mental horizon that makes the facts of home life of less importance and turns the attention further afield. In other cases (for example, in the remarkable progress in the use of quantitative terms, which is one of the distinctive features of the fourth year) there is evidently a growth in the power to work with abstract ideas and relations. But why the decline in play words and in words referring to animals? Why again the marked decrease, especially in the fourth year, in words denoting persons of all sorts and particularly official persons, as well as social institutions? There are certainly no other signs of a diminishing interest in such facts, and no deficiency of words relating to them in the complete vocabulary. The explanation would seem to be that verbal expression registers not the greatest interest but the greatest *new interest.*"

My results agree with his except in the increase in words relating to the body, dress and house, and a decrease in animal terms. In these respects mine were decidedly the opposite. Part of the divergencies are doubtless due to the difference in the two children and their environments and the rest to our methods. The words used in the 1250 sentences make up 58 per cent of the total vocabulary at three and 40 per cent at four. It is evident that there is a large element of

chance in his results. If he had happened to get the other 60 per cent of words his findings might have been different. It is a pity he does not give the proportions of the different groups in the total vocabularies.

Special Vocabularies

Number

At three, E's notion of counting was "3, 4, 5" which she applied on all occasions. She had no adequate idea of number beyond two, until she was nearly four. Once when she was 45 months old her father asked her how many eggs she had gathered that morning, she answered, "Two and one more." "That makes three," said her father. "No," she persisted, "two and one more." And although she often asked us to count things, she had no desire to learn herself.

Just before she was four she came to her grandmother's and was constantly with her cousin. He had taught himself a good deal about numbers and used to count and count for E's benefit, sometimes when she preferred he would play. But she learned to count to eight, and to really know what the numbers up to six mean — that five is one more than four, six one more than five, that two and two make four, etc. She learned to count from listening to the other child, and studied out the relationships herself. From her 47th to her 49th month she would count up to forty but not correctly. She would count endlessly as she played instead of improvising poetry as she used to do—an example of the suffocating of originality by too early emphasis on school subjects. Fortunately, at 51 months, she has forgotten her absorbing interest in counting and invents conversation for her toy animals, but she has not taken up the poetry again.

Time

At three E used ten nouns denoting time, by four she had more than doubled this number, having a total of twenty-five. At three she used only "today," at four "tomorrow" and "yesterday." At three, she knew "morning" and "nighttime," at four, she had added "afternoon," "evening," and "night." At three, the only season she knew was the one then existing, "spring"; at four she talked of summer and winter.

Interesting as the increase in her terms for time is, yet the smallness of her four-year-old vocabulary is striking. It does not include the names of any day or any month. There is nothing in her experience that differentiates one day from

another, or one month from another. Seasons she is beginning to grasp, and the idea of children's ages in years, but of course a year must be a vague conception for her. Her memory does go back a full year for certain things. Time by the clock means nothing to her. She does not know the difference between morning and afternoon. She never can get the names of the meals straight, "supper" being her favorite designation for them all; occasionally she will speak of "mornin' supper" and "evenin' supper." "Last night," "yesterday" and "tomorrow" seem to be getting clear cut to her at 51 months. At 50 months she asked me the names of the days of the week and tried to learn them, but they evidently have very little meaning for her.

Space

E's ideas of space have been and still are very inadequate. Soon after she was three, we traveled from Massachusetts to Oklahoma — a journey of 3000 miles, consuming three days and three nights. Yet sometimes from an upstairs window in Oklahoma she would look out over the prairie and think she saw her grandmother's home in Massachusetts. Shortly after we had traveled back to Massachusetts when she was nearly four, some of the family went in the automobile to a town 20 miles distant, going and coming in one afternoon, E inquired, "Is Ware as far as Oklahoma?"

Color

When E was 21 months old we thought we would teach her colors in a natural way by mentioning them in connection with objects. The result was that color names were added to her vocabulary in profusion, but their application was all askew. So we dropped all reference to colors whatsoever, and she gradually forgot the words. A little later, when she was about 25 months old, she began to learn the colors correctly from her cousin, who at that time showed a great interest in that direction. She must have learned five or six colors from him when she was somewhat over two. At three she had a color vocabulary of eleven names of colors and four related words, and at four, sixteen names of colors and six related words. All of these names were correctly applied to the appropriate colors.

Animals

It is plain that animals are E's specialty. At 18 months her animal terms numbered 31 or 25.4 per cent of all her nouns. At three she used 99, or 14.7 per cent of her nouns; at four

183 or 18 per cent. In the vocabularies of other three-year-olds the actual number of animal terms runs from 14 to 48, or 3 to 6 per cent of the total number of nouns. In the four-year-old vocabularies, the numbers range from 28 to 100, from 4.5 to 8 per cent.

At 18 months one half of E's animal words came from pictures and stories; at three, one-tenth, and at four, one-eighth.

CONCLUSIONS

Finally to come to our last problem — what can we tell of the mental development of a child from her vocabulary — there are two general conclusions. The first is that E's English is far from being established. She is just mastering her pronunciation, she makes mistakes in grammar, she lacks many essential words which she will have to learn later. The natural inference from this would be that language training is all important for her — she should learn to speak first and foremost. Spoken English is the foundation and should be well established before written or printed English is begun. Again it seems reasonable that she should master her mother tongue before learning a foreign language.

The other fact that is made evident by this study is the immaturity of this four-year-old child. Consider the few words for time, the inadequate conception of space, and the remarkably small, although fast increasing number of abstract words. She knows the world about her well in a way—in fact, she knows more animals and flowers than many adults. But a child with only thirty-eight abstract words in her vocabulary is not ready, it seems to me, to understand much reasoning or religion. One gets into trouble in trying to superimpose too elaborate abstract ideas on a limited foundation.

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A STUDY OF A FIVE-YEAR-OLD CHILD

By Mildred Langenbeck, Washington, D. C.

The following is a study of an unusually precocious child including her vocabulary of 6837 words, and ending with her fifth year. It is in no sense the record of an infant prodigy who has been taught and directed into definite channels but it deals with a purely natural development. The temptation to teach and encourage so responsive a mind has been resisted and no attempt has been made to assist in co-ordinating her accumulating ideas and impressions, so that her mental growth up to the present time has been entirely natural and spontaneous.

So far as the writer knows there is no other published child's vocabulary of this size. No effort has ever been made to teach Elizabeth new words, though being an only child her main association has been with adults. The following list has been compiled solely from her own unaided talk, gathered chiefly while she played alone, talking incessantly to herself, to her dolls, and to imaginary companions. While she unquestionably had but a vague understanding of many of the words she used, I have included none that were not employed by her in a correct sense, showing a general understanding of their meaning.

She is highly imaginative and lives largely in a dream world of her own creation. Her games are nearly all pretense that she is some one else and that she is surrounded by companions, sometimes purely fictitious, though often characters out of books that have been read to her. So her world is peopled with knights and ladies, cow-boys, "cow-girls," soldiers, Indians, and many imaginary friends. She is familiar with a great number of books besides the ordinary child-lore and listens eagerly to any reading, though no effort has ever been made to read her instructive or educational books, but merely to entertain her. She has never heard "baby-talk" and has always enunciated with great precision which, in conjunction with a highly retentive memory, has been an undoubted factor in her acquisition of a vocabulary. The accuracy of her pronunciation has made the more noticeable the few inversions she used—as, for instance, ridiclious for ridiculous, fuge for

huge, ambliance for ambulance, calomore for calomel, miraclious for miraculous, ephelant for elephant, and codly-deliver for cod-liver-oil. With these few exceptions, her speech has always been clear and accurate.

When being read to she asks the meaning of every unfamiliar word, and rarely forgets it, using it thereafter in its proper place. Her memory for persons is also unusual. At the age of eighteen months, she spent the summer among people she did not see again for a year, nor hear spoken of except when she occasionally referred to them herself—yet she perfectly recollected them, both names and faces, on re-seeing them the following summer. She has been rarely asked to memorize anything, but her uncle, for a joke, taught her Herbert Spencer's definition of life at the age of three and a half years. She has never forgotten it, though often months have elapsed without her being asked to say it—and she enunciates every word clearly and distinctly. I give it here not merely to illustrate her power of memory, but still more the correctness of her ear, and her power of clear enunciation, for of course the words themselves are meaningless to her. "Life is a definite combination of heterogeneous changes both simultaneous and successive, in correspondence with external co-existences and sequences."

Many of her forbears have been distinguished men and women, and on both sides, her family have been people of more than the average capacity and cultivation. From an early age she has shown unusual muscular co-ordination, using her fingers daintily and with precision. From her eighth month she used a paper and pencil, drawing recognizable figures. At four years she could illustrate a little story composed by herself. For example, a lady is leading out her dog at night. (You know it is night because of the moon and stars.) She does not see the railroad track and they are run over by an engine. Below is a cemetery with a large stone over the lady's grave and a small one over the dog's. Nothing better illustrates her keenness of observation and her sense of form than her drawings. She will, for instance, try to reproduce her room, with all the furniture in place, and many surprisingly trifling details, and often will make all the rooms in a house in this way, keeping their relative positions. This was never suggested to her but was a spontaneous effort. Also she had some native sense of perspective. There is a great variety in the faces and figures she draws and they show a distinct sense of humor.

The source of much of her knowledge is a mystery to her parents, and can only be explained by her keen observation

and retentive memory, as well as by a power of comprehension much beyond her years. However absorbed she may appear to be in her play, talking vigorously to herself and to imaginary companions all the time, she nevertheless hears everything that is said in her presence, though months will often pass before she alludes to it—whether it be some circumstance that could not later have been referred to so as to revive the impression, or some word that was new to her.

Her imagination is unusually active and from the time she could speak she would coin names for every one she knew, not, as is the case usually with children, because she could not easily pronounce the true name, but from an innate love of nicknames—and perhaps in large part because of a strong feeling of opposition and the desire always to say and do the unexpected. This latter trait causes her often, when she is asked her name, to give a purely fictitious one and maintain it with absolute gravity and firmness. She called her grandfather by the German title "Groszpapa," but soon changed it to "Grosy-wosy," Peter she altered to "Peetsy" and later to "Petens." When asked once the name of her doll, (which by the way had never had a name) she replied on the instant Crocadile-Ghosty and by that cognomen it went ever after. Another she named with equal spontaneity Agnes Coreda.

Such clear thought and perfectly logical mind are unusual in combination with her imaginative powers and her habits of dreaming and pretending. She has a keen sense of humor, loves a joke and usually sees its point, and is a great tease. Referring once to her father, who is exceptionally tall and spare, she remarked, " See my little Papa toddling up hill." Perusal of her vocabulary gives an inadequate idea of her command of language. Her quickness in catching expressions, technical turns, paraphrases, etc., is only equalled by her subsequent comprehending use of them. The proportion of qualifying words in her vocabulary is very large, as is always the case with a precocious child—and all perceptions are wonderfully acute. Her natural discrimination is exemplified in such expressions as "the lapping of the water," "the murmuring of the trees," "unfurling my flag," "satirical laughter," etc. Such adjectives as "grayish-green," " pinkish," " yellowish-brown," etc., are most unusual even in far older children — and she picked up the names of forms, as circle, triangle, square, pentagon and rhomboid, without ever being directly taught them. It was interesting in this connection to see her cleverness in piecing together a picture puzzle. I showed her only once and she immediately grasped the idea and made the picture very nearly perfect, showing both her color and form sense. As a

child, her reasonableness was remarkable. If trying unsuccessfully to fit one thing into another she would always hand it at once to me if I said, "Let me show you," and would watch until she could do it herself. My observation of most children is that they always prefer obstinately to do it in their own way.

She taught herself her letters from street-signs and books and could print them all before she was three, and during the next few months would write letters of several pages of her own composition, having the words of course spelled for her. She has an accurate ear and could sing a tune correctly before her second birthday, and dances in excellent time. She also imitates voices and intonations, and this faculty has undoubtedly been of material influence in enlarging her vocabulary.

She had a German nurse until she was two and a half, and understood a good deal of German, using a few words herself and singing a number of German songs. Since then she has materially forgotten this, so I include in her vocabulary such few German words as she still uses in addition to their English equivalents, as they are in no sense a translation but represent for her a distinct concept.

It seemed that in connection with her vocabulary it might be of interest to insert a list of the words used by her at sixteen months. They number 229, a very remarkable number for that age and a clear proof to my mind that the size of her present vocabulary is due less to outward associations and influences than to inherent capacity. It will be found that certain words occur in this earlier list which do not appear in the later vocabulary. In compiling the latter I covered a period of six months, including all words used during that period and ending on her fifth birthday — but I did not include, as do most pedagogues, words previously used but since forgotten. I have also excluded the parts of regular verbs except participial adjectives thinking that with a child of her age it made a fairer estimate not to do so, although J. S. Hall includes them in the vocabulary of his four year child. Of course, this materially lessens the total number of words used.

Her thoughtfulness and the logical quality of her mind may be best illustrated by a few anecdotes. What is most striking in Elizabeth and most unusual in children of her age is her power of correlating her ideas and acquisitions. Every new thought or impression is at once associated with some previous idea. Hence, doubtless, her marvelous memory. For example, in a country walk she noticed a typical Virginia snake fence and wished to call attention to it but knew

no specific name, having never seen one before. After a single moment's hesitation, she said: "You see that M or W fence." Surely nothing could have described its form better.

She is never content until she knows the exact name for every new thing and its every part. She has a great love of Nature, doubtless encouraged by much out-door life, and knows by name a great number of flowers, birds and trees. She asked me at the age of four, "Is heat a spirit? We hear it in the steam-pipes and feel it, but we cannot see it—so I thought it must be a spirit." Her quickness of thought and readiness with an instant and convincing answer were typified one dusty, blustering day when we were out walking. A cloud of dust enveloped us to her great indignation and being a very vehement character she exclaimed, "I should like to kill the dust." In answer to my reproof, "Do not be so foolish, how can any one kill the dust"? she replied, "Very easily, pour a little water on it." That, at the age of four.

An ex-professor of Johns Hopkins, a man of much experience and culture who knew her at the age of two years and nine months, was deeply impressed by her precocity. He considered that her power of apperception, of apprehending one's idea before he had finished expressing it, would prove to be quite phenomenal could it be measured, and ever since her birth she attracted the attention of strangers by her remarkable alertness and intelligence. A series of tests of her intelligence made at the age of five by the Binet-Simon method by a Fellow in Biology at Johns Hopkins and a student in their Psychological laboratory, gives her mentality as that of eleven years. But of even greater interest than this general average is the character of what she could and could not reply to. Such simple questions as naming the day of the week and month, distinguishing coins and their relative value, telling time and similar matters, nearly all a question of teaching or experience and known to the average child of seven or eight, she failed in. But where her observation, her logical quality of mind came into requisition, in such questions as, "Copy design after ten seconds exposure," "Describe certain pictures," "State difference between paper and cloth, butterfly and fly, wood and glass in two minutes," "Tell what we should do in various specified emergencies," "Use three given words in one sentence," "Detect nonsense in certain given statements in limited time," "Define charity, justice, goodness," "Interpret given pictures," "Name the opposite of twenty given words," "Imagine and draw new form produced by joining transposed pieces of diagonally divided rectangular card," her answers were unhesitating. These are

the tests given up to fifteen years—the last being among the mentality tests of an adult—and were all answered correctly by Elizabeth on two different occasions.

A special interest to the student of pedagogy attaches to certain classes of word such as "coined words," and terms expressive of color, size, shape, and tactual qualities. I shall append a few tables of these together with the two vocabularies. The total vocabulary at five years numbers 6837 words. Of these 56.8% are nouns, 21.8% are adjectives and adverbs, 19.3% verbs — the remaining parts of speech amount to 2.17%. The total number of coined words, including nick-names and deliberate perversions, is 23. She used many others previous to the time when I began to compile her vocabulary, but having included no word that did not occur during the six months previous to her fifth birthday, I of course omit them.

COINED WORDS AND NAMES

Bargie, Bep, Blue-eyes (optician), Crocadila-Ghosty, doodling, Echo-Bridge, Grosy-wosy, laten (to make late), Mamsie, Mimi, neatening (to make neat), Peetsie, Petens, plak (pretend), Popsy, Popsy-wopsy, Ro Bo, smelly, Tapster, Up jar (pitcher), Urachet, Wortens, Wortsey.

VISUAL IMPRESSIONS

A. Color Terms, 117

Amber, auburn, black, blackish, blazing, bloody, blue, bluish, brazen, bright, brighten, brighter, brightest, brightness, brilliant, bronze, brown, cardinal, chocolate, cloudy, coal-black, color, colored, coloring, coral, creamish, crimson, crystal, dark, darker, dim, dingy, dismal, dotted, dull, faded, faint, fiery, flaming, flashing, foggy, gilded, gilt, glaring, gleaming, glimmering, glittering, gloomy, glow, gold, golden, goldish, gorgeous, gorgeously, gray, grayish, grayish-blue, grayishness, gray-tipped, green, greenish, greenish-yellow, hazy, inky, irridescent, ivory, jet, lavender, light, lighter, lightest, lilac, milkish, milky, misty, moonlight, mother-of-pearl, mud-colored, muddy, orange, pale, pearly, pink, plaid, polished, purple, red, reddish, reddish-yellow, rosy, scarlet, shade, shadow, shady, shining, shiny, silver, silvery, smoky, snowy, sooty, spangled, sparkling, speckled, spotted, streaky, striped, sunshiny, tan, twilight, twinkling, violet, white, yellow, yellowish.

B. Form Terms, 73

Acute, alike, arched, bell-shaped, bent, bulge, bumpy, bushy, carved, circle, clump, cone, cornucopia, crescent, crooked, cross, curly, dome, drooping, fat, flat, forked, hexagon, hollow, horn-shaped, humpy, hunk, jagged, level, lofty, long, lump, lumpy, narrow, oblong, parquetry, pentagon, plumed, plump, pointed, polka-dot, prone, pyramid, rectangle, rhomboid, right angle, rolling, round, semi-circle, shallow, shaped, short, shorter, slanting, slender, snaky, square, steep, straight, swelling, tall, taper, thin, thick, three-pronged, towering, triangle, trumpet-shaped, twisted, variety, wide, widest, winding.

C. Tactual Terms, 107

Absorbent, ache, agonizing, agony, blunt, brittle, burning, chapped, chilly, coarse, cold, colder, coldest, cool, cooler, crisp, damp, dripping, dry, elastic, flat, flimsy, fluffy, foamy, fragile, freezing, frothy, frozen, furry, fuzzy, glossy, greasy, hairy, hard, hardened, harder, hardest, harsh, hot, hottest, icy, itchy, knotted, limp, liquid, melting, metal, mushy, oily, polished, powdered, powdery, prickly, red-hot, ragged, rocky, rough, roughest, sandy, scalding, shaggy, sharp, sharper, shrivelled, silky, slick, slippery, slushy, smeary, smooth, snowy, soaking, soapy, soft, solid, sore, steep, steepest, sticky, stiff, stone-cold, stringy, sultry, swelling, sweating, tender, thick, thicker, thickest, thin, thorny, ticklish, tight, tightly, tingle, touch, trembling, warm, watery, wax, wet, wooden, woolen, woolly, wringing-wet, wrinkled.

D. Terms of Taste and Smell, 31

Acid, agreeable, bitter, cheesy, delicious, disgusting, fat, fishy, flavor, good, juicy, nasty, nice, oily, peppery, raw, ripe, salty, smell, smelly, sour, spicy, stale, sugary, sugared, sweet, sweetness, taste, tender, thirsty, tough.

E. Sound Terms, 158

Barking, bawling, blood-curdling, braying, bubbling, buzzing, crackling, calling, chattering, cheering, chirping, chuckling, clapping, clashing, clattering, clink, clinking, coughing, cracking, crackling, creaking, croaking, crushing, cry, din, ding-dong, doodling, dripping, drizzling, dropping, drumming, echo, explode, fiddling, fizzing, fizzling, flapping, flowing, fluttering, foaming, fretting, frothing, frying, gabbling, gargling, gasping, giggling, gnashing, gnawing, grinding, groaning, growling, grumbling, gulping, gurgling, gushing, halloo, hammering, hear, hiccough, hissing, ho, hooting, howling, humming, hurrah, jabbering, jangling, jeering, jingling, klicking, knocking, lapping, laughing, lisping, loud, mewing, moaning, mocking, moo, munching, murmuring, music, muttering, neighing, noisy, ouch, ow, panting, pattering, pop, pound, puffing, purring, quack, rattle, ring, roar, scratching, screaming, screeching, shoo, shouting, shrieking, shrill, sighing, singing, sizzling, slam, snap, sneeze, snore, snort, sob, softly, splash, squeak, squeal, squeeze, stammer, stamping, sucking, talking, tapping, tearing, thumping, thunder, tick-tack, ting-a-ling, tink-a-tink, tinkle, tolling, tone, tooting, tramping, trickling, trotting, trumpeting, tu-whit, tu-whoo, twittering, uttering, voice, wailing, war-hoop, weeping, whew, whimpering, whining, whinny, whispering, whistling, whoa, whooping, whooping-cough, yawning, yelling, yelping.

VOCABULARY AT SIXTEEN MONTHS, *229*

(*German Words in Italics*)

A B C, all gone, all right, along, Amanda, Ba ba black sheep, baby, bag, ball, balloon, basket, bath, *Baum,* bear, beam (sun), bed, bee, *beisst,* bell, big, birdy, *bitte,* blocks, bone, boo, book, boot, bottle, bow-wow, box, boy, *bummel-bammel,* bunny, butter, button, bye-bye, cap, car, carriage, catch, chair, clock, closet, coat, comb, come, cough, cover, cracker, cream, cup, *da,* dance, *danke dir,* dark, day, dear, do, dog, dollie, door, down, drawer, dress, drink, *dunkel,* ear, eat, eye, fall, feather, find, fine, finger, fire, fish, fix it, flag, floor, flower, fly, food, foot, fork, *fort,* Friday, *Frosch, Frühstück,* Gee Gee, girl, go, goat, going, good, grease, *Gummischuh, gute Nacht,* hair, hand,

Handschuh, hat, head, *heiss,* hell, heep, here, hole, horse, hot, house, how do, hungry, hurrah, in a minute, *ja,* key, kiss, kitty, knife, lady, late, letter, light, little, look, lovely, Mama, man, Mary, me, *Milch, merci,* Mimi, mind, mine, *mit,* momo (auto), Monday, money, moo, moon, more, morning, mug, music, Nana, naughty, *nein,* no, nose, oh my, one, orange, Papa, paper, peek a boo, pencil, Pete, *Pferd,* pick-it-up, picture, pie, piece, pig, pigeon, pin, please, poor, powder, pretty, quack, quick, read, reins, ride, ring, room, rose, *ruhig, Rührung,* run, Saturday, see, see-saw, shame, shoe, show, *siehst du,* sing, sky, sleepy, smoke, sneeze, snow, so, some, spool, spoon, squirrel, Sunday, sunny, talk, taste, *Taschentuch,* Teco, Tedd, thank you, Thursday, tickle, tick-tack, tinkle, toast, touch, try, tub, Tuesday, two, up, up-a-daisy, walk, water, Wednesday, wind, window, write, yes, you, *Zug, Zwieback.*

VOCABULARY AT FIVE YEARS, 6837

A, abacus, Abby, Abby-cat, able, aboard, abominate, abominable, about (adv.), about (prep.), above, abroad, abscess, absence, absent, absolute, absolutely, absorbent-cotton, absurd, absurdly, accept, acceptance, accident, accidentally, accompany, accomplish, accordingly, accuage, aggravate, aggravating, ago, agonizing, agony, agree, agreeable, ah, acid (adj.), acknowledge, acorn, acquainted, acrobat, acrobatic, acrobating (v.), across, act (n.), act (v.), acting, action, active, actor, actress, actual, actually, acute, Ada, Adam's-apple, Adams Statue, add, address (v.), address (n.), adieu, adjoining, admirable, admiral, admire, admit, Adora-Duncan (Isadora), adore, adored (n.), adorn, advertise, advertisement, advice, advise, Aegean Sea, aeronaut, aeroplane, affair, affected, affection, affectionate, affectionately, afford, Afghan, afraid, Africa, African, after (prep.), after (adv.), afternoon, afternoon-tea, Afton, afterwards, again, against, Agamemnon, age, aggravate, aggravating, ago, agonizing, agony, agree, agreeable, ah, aha, ahead, aid (v.), aid (n.), aim (v.), aim (n.), ain't (is not), air, air-cushion, aisle, Aladdin, alarm (v.), alarm (n.), alarming, alas, Alaskan bear, albatross, Alberta, album, alcohol, ale, alert, Alfred, Alice, alike, alive, all (adv.), all (adj.), alligator, allow, almanac, almighty (adj.), almond, almost, aloft, alone, along (adj.), along (prep.), aloud, alphabet, Alps, already, also, altar, alter, although, altogether, Alvin, Theatre, always, am, amaze, amazed, ambassador, amber, amen, America, American, amiable, ambliance (ambulance), ambrosia, amoline, among, amount (v.), amount (n.), ample, amputate, amuse, amusement, amusing, an, ancestor, anchor (n.), anchor (v.), ancient, Ancient Mariner, and, Anderson, Andrew, anecdote, angel, angelic, anger, angle, Angora cat, angry, anguish, animal, ankle, Anna, Anheuser Busch, Annisquam, annis seed, announce, annoy, annoying, another, answer (n.), answer (v.), ant, ante-pasta, antique, antlers, anxiety, anxious, any, anyhow, any-where, apart, apartment, ape, aphid, apiece, apologize, apostrophe, apparently, appear, appearance, appetite, applause, apple, apple-blossoms, apple-tree, apply, Apollinaris, appreciate, approach (v.), approach (n.), appropriate, approve, apricot, April, apron, apt, arbutus, arch, arched, archers, architect, are, aren't, argue, arise, arm, arm-chair, arm-hole, armor, arms (weapons), army, army nurse, arose, around, arrange, arrangement, arrest, arrive, arrival, arrow, art, Arthur, artichoke, article, artificial, artillery, artist, as, as-as (adv.), ascended, ashes, ashamed, ash-man, ashore, Asia, ask, asleep, asparagus, aspect, ass, assist, assistant, associate, assure, assuredly, aster, astonished, astonishing, astonishment, asylum, at, ate, Athelstane, Atlantic City, Atlantic Ocean, Atlas, atrocious, attached, attack, attempt (v.), at-

tempt (n.), attend, attendant, attention, attic, attitude, attractive, auburn, audience, *auf Wiedersehen,* August, Augusta, aunt, Aunt Glegg, auntie, au revoir, Australia, author, automobile, autumn, avenge, avenue, avoid, awake, away (adv.), away (interj.), awful, awfully, a-while, awkward, awning, axe, awe, azalea.

Baa, babe, baboon, baby, baby-dress, babyishly, Bacchus, bachelor, back (n.), back (v.), back (adv.), backgammon, background, backstairs, backwards, bacon, bad (naughty), bad (rotten), bade, badge, badger, bad-tempered, bag, baggage, bah, bake, baker, bakery, balance (v.), balance (n.), balcony, bald, bald-headed, ball (party), ball (toy), balloon, ball-room, balsam, Baltimore, bambino, bamboozle, band (group), band (ribbon), band (music), bandage, bandaged, bandanna, bannister, bang, bangs, bank (building), bank (hillside), bank-book, banner, banquet, baptize, bar (n.), bar (v.), barbarous, barber, barbered, bare, bareback, barefooted, barely, barette, bargain, Bargie (name), bark (v.), bark (n.), barley, barn, barnyard, barrel, barricade, base, baseball, basement, bashful, Basic (city), basin, basket, Bass Rocks, baste, bat (bird), bat (club), bath, bathing, bathrobe, bathroom, bathtub, Batten, batter (v.), batter (n.), batter-bread, battle, battle-ax, battlefield, battlements, Baucis, bawl, bawling, bay (water), bay window, be, beach (shore), beech (tree), beacon-light, Beacon Street, bead, beaded, beak, beaker, Beale, beam, bean, beanbag, beanpod, beanstalk, bear (n.), bear (v.), beard, beast, beastly, beat, beating, beautiful, beauty, beauty-sleep, beaver, Beazley, because, became, beckon, become, becoming, bed, bedded, bedroom, bedroom-slippers, bedspread, bee, beef, beefsteak, been, beer, beets, beetle, before (adv.), before (prep.), beforehand, beg, began, beggar, begin, beginning, begun, behave, behavior, behind, being (v.), being (n.), believe, bell, bell-boy, Belle, bell-flower, bell-man, bellow, bell-shaped, belly, belong, belongings, beloved (n.), beloved (adj.), below, belt, bench, bend, bending, beneath, bent (v.), bent (adj.), Bep, Beppo, Berlin, berry, berth, beside (adv.), beside (prep.), besides, best, bet, Bethlehem, better, Betsy, Betty, beware, between, bewitched, beyond, Bezique, bib, bib and tucker, bid, big, bigger, biggest, bill (bird), bill (money), Bill (name), billows, billy, Billy, bind, biology, biplane, birch tree, bird, bird cage, birthday, biscuit, bishop, bishop (chess), bit (n.), bit (v.), bite (n.), bite v.), bitter, bitterly, black (adj.), black (v.), Blacks, blackberry, blackbird, blackboard, black-eyed, black-eyed Susans, blackish, blacksmith, blade, Blanche, blank, blank-book, blanket, blast, blaze (n.), blaze (v.), blazing, bleed, bleeding, blessed, Blimber, blind (adj.), blind (v.), blindfold, blinding, blink, blister, block (n.), block (v.), blockhead, blood, blood-curdling, blood-root, blood-stain, bloody, bloom, blossom (n.), blossom (v.), blot, (n.), blot (v.), blotter, blow, blow-pipe, blue, Bluebeard, blueberry, bluebird, blue-eyed, Blue eyes (optician), bluish, blunt, blush, boa, boar, board (n.), board (v.), boarders, boarding school, boaster, boat, bobbing, Bob Jakins, Bob White, Bodeker, bodkin, body, bogey, Bo-peep, boil, boiled, boilers, bold, boldest, boldly, bolster, bolt (n.), bolt (v.), bolted, bone (n.), bone (adj.), bonfire, bonnet, bonny, bonny-clabber, booblijock (turkey), Boojum, boo-hoo, book, bookcase, bookmark, bookstore, boots, booty, borax, border, bore (carry), bore (tire), born, Borneo, borrow, borrowed, bosh, bosom, boss (n.), boss (v.), Boston, Boston store, both, bother (n.), bother (v.), bottle, bottom, bough, bought, bounce, bouncing Betty, bound (tied), bound (determined), bounding, bouquet, bow (v), bow (ship), bow (courtesy), bow (arrow), bow (ribbon), bow-knot, bowl, bowling-alley, box (n.), box (v.), boy, boyish, boy's (adj.), Boy Scouts, Boylston Street, bracelet, bracket, braid (n.), braid (v.), braided, brain, brake, bran, branch, brand-new, brat, brave, bravely,

braver, bravest, bravery, bray, brazen, Brazil, Brazilian, bread, break, breakers, breakfast, breast, breastbone, breastpin, breath, breathe, bred, breeze, breezy, briars, bricks, brick (adj.), bridal veil, bride, bridegroom, bridesmaids, bride's veil, bridge, Bridge (card game), bridle, bright, brighten, brighter, brightest, brightness, Brighton, brilliant, bring, brink, bristles, bristol-board, British, brittle, broad, broader, broadest, Broad Street, broil, broke, broken, broken-down, bronze, brook, broom, broth, brother, brother-in-law, brought, brow, brown, Brown, Brown-Betty, brown-bread, brown-haired, Bruin, bruise (n.), bruise (v.), bruised, brush (n.), brush (v.), brutal, brute, Bryn Mawr, bubble, bubbling, bucket, buckle (n.), buckle (v.), buckskin (adj.), buckskins, bud (n.), bud (v.), budge, budding, buffalo, buffer, bug, buggy, bugle, build, builder, building, built, bulge, bull, bulldog, bully, bum, bumblebee, bump, bumped, bumpy, bunch, bunched, bundle, bungalow, bunny, bureau, burglar, burn (n.), burn (v.), burning, burnt, burst, bury, burying-ground, bush, bushel, bushy, business, bust, busy (adj.), busy (v.), but, butcher, butler, butter (n.), butter (v.), buttercup, buttered, butterfly, butterfly-net, button (n.), button (v), buttonhole, buttonhook, buy, buzz, buzzard, buzzing, by, bye-bye.

Cab, cabbage, cabin, cocoa, cackle, café, cage (n.), cage (v.), caged, Cairo, cake, calendar, calico, California, calisthenics, calf, call (n.), call (v.), callers, calm, calomore (calomel), cambric, came, camel, camera, camp, camping, camphor, camp-stool, can (n.), can (v.), Canada, Canadian, canary, candelabra, candied, candies, candle, candlestick, cane, cannibal, cannon, cannon-ball, cannot, canoe, cantaloupe, cantilever (bridge), canvas, cap, capable, cape, capital, capitol, capoletti, captain, capture, car, caramel, carbon-paper, carcass, card, card-case, cardinal (bird), cardinal (color), card-party, care (n.), care (v.), careful, carefully, careless, Carmichael, carnation, Carolina wren, Caroline, carousel, Carnegie Museum, carpenter, carpet, Carr, Carrabbas, carriage, carrot, carry, cart, carved, carve, carving knife, case (box), case (in), cast, castle, castle (chess), cat, catalogue, catch (n.), catch (v.), catching, caterpillar, cathedral, Catholic, Catherine, cattle, Cat-of-the crags, caught, cauliflower, cause, cautious, cautiously, cavalry, cavalier, care, caw, cease, cedar, ceiling, celebrate, celebration, celery, cell, cellar, celluloid, cemetery, censer, cent, centipede, centre, cereal, ceremony, certain, certainly, chafing-dish, chain, chained, chair, chalet, chalk, challenge (n.), challenge (v.), chamber, chambermaid, champagne, chance, chancing, chandelier, change (n.), change (v.), Chanticleer, chap, chapel, Chapman, chapter, chapped, chariot, Charley, Charlotte, charlotte russe, charming, charred, chase (n.), chase (v.), chasm, chatter (n.), chatter (v.), chatter-box, chattering, chauffeur, cheap, check, check-book, checked, checkers, checkmate, check-rein, cheek, cheer (n.), cheer (v.), cheerful, cheese, cheesy, chemical, chemist, chemistry, cheque, cherry, Chesney, chess, chessmen, chest (box), chest (anatomy), chestnut, Chevy-Chase, chew, chewing-gum, Chicago, Chichester, chicken, Chicken-Little, chief (n.), chief (adj.), chiefly, chieftain, chiffon, child, children, childhood, childish, chilly, Chimera, chimney, chin, china (n.), china (adj.), China, chinese, Chingatchagook, chipping, chip, chipmunk, chips (poker), chirp, chirping, chocolate, chocolates, choking, choo-choo (train), choose, chop (n.), chop (v), chorus, chose, Christ, Christ-child, Christine, Christmas, Christmas-tree, chuckle (n.), chuckle (v.), chum, church, Church Hill, churchyard, churn, cigar, cigarette, Cincinnati, cinder, Cinderella, circle, circulation, circumstance, circus, city, Civil war, clad, clam, clamber, clamoring, clap, clapping, Clara, Clarence, Clarke, clash (v.), clash (n.), clashing, clasp, class, clatter, clattering, claw (n.), claw (v.), clay, clean (v.), clean (adj.), clear (v.), clear (adj.), Clementine,

clergyman, clerk, Cleveland Park, clever, cleverly, click, climb (n.), climb (v.), climbing, cling, clink (n.), clink (v.), clip, clips, cloak, clock, close (adj.), close (v.), closed, closet, cloth, clothes, clothes-basket, clothes-brush, clothes-horse, clothes-line, clothes-pin, clouds, cloudy, clover, clown, club (stick), club (gathering), clump, clumsy, clung, clutch, clutches, coach, coachman, coal, coal-black, coarse, coast (n.), coast (v.), coat, coated, cobbler, cobble-stone, cobweb, cock, cocking, cock-a-doodle-doo, cockatoo, cock-robin, cock-tail, cocoa, cocoa-nut, codfish, codfish balls, codly-deliver (cod-liver-oil), coffee, coffee-pot, coffin, Cohen, coil, coiling, cold (n.), cold (adj.), cold-cream, colder, coldest, collapse, collar, collect, collection, college, collision, cologne, colonel, color, colored, coloring, colossal, Columbia, columbine, column, comb (n.), comb (v.), combination, come, comet, comfort (n.), comfort (v.), comfortable, comfortabler, comic, comical, command (n.), command (v.), commence, comment, Commodore, common (n.), common (v.), commotion, companion, company, compass, compelled, complain, complete, completely, complexion, complicated, compliment, comrade, conceive, conceivable, concert, conclusion, condensed-cream, condition, conduct, conducted, conductor, cone, confetti, confusion, congratulate, congratulations, conjurer, connect, connected, Connecticut Avenue, conquer, conqueror, consent (n.), consent (v.), consequence, consider, considerate, considerably, consists, console, constant, Constantinople, constantly, construct, consult, contain, content, contented, continue, contradict, contrary, control, convenient, conversation, converse, convince, cook (n.), cook (v.), cooked, cooky, cool (v.), cool (adj.), cooler, coop, copy (n.), copy (v.), copy-book, Cora, coral, cord, core, cork (n.), cork (v.), corkscrew, corn, cornbread, Cornelia, corner, corn-flakes, corn meal, cornucopia, corps (army), correct (v.), correct (adj.), correctly, correspondingly, corsets, cosey, cost, costume, cot, cottage, cotton, couch, cough (n.), cough (v.), could, couldn't, count, counter, counterpane, country (birth-place), country (not city), countryman, country-wagon, county, couple, courageous, course, course-dinner, court, courtesy, court-house, courtiers, cousin, cover (n.), cover (v.), covers (bed), covering, cow, coward, cowboy, cowcatcher, cozy, crab, crack (n.), crack (v.), cracked, cracker, cracker-jack, crackle, cradle, Craigie, cramming, cranberry, crane, crank (handle), crank (person), cranky, cravat, crawl, crawling, cray-fish, crayon, crazy, creak, creaky, cream, cream-cheese, creamish, cream-of-wheat, creature, creek, creep, creep-mouse, crepe, crescent, cress, crib, cribbage, cribbage-board, cried, crime, crimson, crisp, croaking, crocodile, Crocadila-ghosty, crook, crooked, croquet, croquette, cross (n.), cross (v.), cross (adj.), cross-bow, cross-patch, crow (n.), crow (v.), crowd (n.), crowd (v.), crowding, crown, cruel, cruelty, cruise, crumb, crumble, crumbly, crumple, crunch, crusader, crush, crushed, crushing, crust, crutch, cry (n.), cry (v.), cry-baby, crying, crystal, cub, cubby-hole, cuckoo, cucumber, cuddle, cuff, Cuffy, cunning, cunningest, cup, cupboard, cupful, Cupid, curb, curds, cure, curiosity, curious, curl, curls, curling-iron, curly, curtain, curtsey, cushion, custard, custom, customer, cut (n.), cut (v.), cute, cutest.

Dab, dabble, Dachshund, Dacotahs, daddy, Daffy-down dilly, dagger, Daggy, daily, daintiness, dainty, dairy, daisy, damage (n.), damage (v.), dame, damn, damp, damper, dance (n.), dance (v.), dancer, dancing-school, dandelion, dandruff, dandy, danger, dangerous, dangle, dangling, *danke dir*, dare, dark, darker, darling (n.), darling (adj.), darn, (be)darned, dash (n.), dash (v.), dashing, date, daughter, daughter-in-law, dawdle, dawn, day, day-break, day-light, day-time, dazzle, Deacon, dead, deadly, deadly nightshade, deaf, deafen, deal

(v.), deal (adj.), Deane, dear, dearly, dearest (n.), dearest (adj.), death cup (mushroom), Deaton, De Bracy, decayed, decent, December, decide, decidedly, deck, declare, decline, decorate, decoration, decorative, deed, deep, deeper, deer, Deerslayer, defend, definition, deliberate, deliberately, delicate, delicious, delight, delighted, delightful, deliver, demand, demon, den, dent, dented, dentist, deny, depart, department, departure, depend, deposit, depot, depths, derrick, descend, describe, desert (n.), desert (v.), deserve, design, desire (n.), desire (v.), desk, desolate, despair, despatch, desperate, despise, dessert, destroy, detach, determined, detest, detestable, devil, devoted (v.), devoted (adj.), devour, dew, diabolical, diamond, diaper, dice, Dickens, Dicky, dictionary, did, didn't, die, dying, diet, dieting, difference, different, differently, difficult, difficulty, dig, digest, digestion, dignified, diligent, Dillon, dim, dimity, dimple, din, Dinah, dine, ding-dong, dingy, dining-car, dining-room, dinner, dinner-dress, dip, dipper, direct, direction, directly, dirigible, dirt, dirtiness, dirty (v.), dirty (adj.), disagree, disagreeable, disappear, disappoint, disappointment, disapprove, discard (v.), discard (cards) (n.), discourage, discover, discovery, discuss, discussion, disease, disgrace (n.), disgrace (v.), disgraceful, disguise, disgust, disgusting, disgustingly, dish, dishful, dishonest, dislike, dismal, dismiss, disobedient, disobey, disobliging, disorder, disorderly, dispatch, displeased, dispose, disposition, disreputable, disrespect, dissatisfied, dissolve, distance, distinctly, distinguish, distinguished, distress (n.), distress (v.), distressed, disturb, ditch, dive, diver, divide, Dixie, dizzy, do (v.), do (musical note), Dobbin, doctor, dodge, dog, dogwood, doily, doing, doll, dollar, doll's-house, dolphin, dome, domino, done, donkey, don't, "doodling," door, doormat, doorway, Dorchester Bay, dormouse, Dorothy, dose, dot (n.), dot (v.), doth, dotted, double (v.), double (adj.), doublet (pair), doublet (waistcoat), doubt, doubts, dough, doughnut, dove, down (adj.), down (prep.), down-fall, down-hill, down-stairs, down-town, downward, doze, dozing, dozen, drag, dragon, dragon fly, drain (n.), drain (v.), dram, drank, drape, drapery, Draughbaugh, draught, draw, drawer, drawers, drawing, drawl, dreadful, dreadfully, dream, dreamed, dreary, dregs, drenched, dress (n.), dress (v.), dressing, dressing-gown, dressing-sack, dressing-table, dressmaker, drifting, drink (n.), drink (v.), *drinken*, drinking-cup, drip, dripping, drive (n.), drive (v.), driver, drizzling, droop, drooping, drop (n.), drop (v.), dropper, drove, drown, drowned, drowsy, drug, druggist, drug-store, drum (n.), drum (v.), drummer, Drummond, drum-stick, drunk, dry (v.), dry (adj.), duck, Duck-luck, Ducky-daddles, Dudley, dug, dull, dumb, dumb-waiter, dummy, dump, dumpling, Duncan, dunce, dungeon, Dunk, Dupont Circle, Durbar, dust, dust-brush, dust-cloth, dust-pan, dusty, Dutch, Dutch-cleanser, Dutchman, dutch-neck, duty, dwarf, dye (n.), dye (v.), dying.

Each, eager, eagerly, eagle, ear, ear-ache, early, earn, earnest, earring, earth, ease, easily, East, Easter, Easter-egg, Easter-hare, easy, eat, echo (n.), echo (v.), Echo Bridge, Edelweiss, edge, edging, eel, effect, effort, egg, egg-plant, egg-shell, Egypt, Egyptian, eider-down, eight, eighteen, eighty, either (adj.), either (pron.), elaborate, elastic, Elba Station, elbow (n.), elbow (v.), electric, electric chair, electric fan, electricity, electrocution, elegant, elephant, elevator, eleven, Elfrida, Elizabeth, Elkton, Elk-run, Ellison, elm-tree, elm-tablets, else (adj.), else (pron.), Elsie, embarrass, embarrassed, embassy, embedded, embrace, embroider, embroidered, embroidery, Emelia, Emma, emory-board, empty (v.), empty (adj.), enamel, enchant, enchanted, enchantress, enclose, encourage, encyclopedia, end (n.), end (v.), endeavor, endure, enemy, engine, engineer, England, English, English-

man, enjoy, enormous, enough, enquire, enrage, enraged, enter, entertain, entertaining, entertainment, entire, entirely, entrance, entreat, entry, envelope, epaulettes, equal, ere, erect (v.), erect (adj.), errand, error, escape (n.), escape (v.), escort, Eskimo, especial, especially, eternal, eternally, Ethel, Europe, Evangeline, Evans, evaporated, Eve, even (adj.), even (adv.), even (v.), evening, evening-dress, evening-star, evenly, ever, evergreens, ever-more, every, every-day, everything, everywhere, evil, exact, exactly, examine, example, exceedingly, excellent, excellently, except, excessively, exchange, excited, exciting, excitement, exclaim, excursion, excursion-boat, excuse (n.), excuse (v.), exercise (n.), exercise (v.), exhaust, exhausted, exhibit, exist, existence, expect, expedition, expensive, experience, expert, explain, exploded, explore, express, expression, expressly, exquisite, extension, extensive, extent, extra, extraordinary, extremely, exulting, eye, eyeball, eyebrow, eye-dropper, eyeglasses, eyelash, eyelid, eyesight, eye-socket.

Face, faced, facing, fact, factory, fade, faded, fagot, fail, faint (n.), faint (v.), faint (adj.), faintly, fair (adj.), fair (n.), fairly, fairy (n.), fairy-story, fairy-tale, faithful, faithfully, fakir, fall (n.), fall (v.), Fall River boat, false, family, famous, fan (n.), fan (v.), fancy, fancy-dance, Fanny, fantastic, far (adj.), far (adv.), farce, farewell, farm, farmer, farmhouse, farmyard, farther, farthest, fascinating, fashion, fashionable, fast (adj.), fast (adv.), fasten, fat (n.), fat (adj.), fatal, fate, father, father-in-law, fatiguing, fault, favorite, fawn, fear (n.), fear (v.), fearful, feast, feasting, feat, feather, features, February, fed, feeble, feebly, feed, feel, feelers, feelings, feet, "feeze," fell, fellow, felt (n.), felt (adj.), felt (v.), fence, fenced, fern, ferocious, ferociously, ferry, ferry-boat, festival, festive, fetch, fever, few, fib, fibbing, fiddle (n.), fiddle (v.), fiddle-faddle, field, fierce, fiercely, fiery, fiery-eyed, fifteen, fifteenth, fifth, fifty, fig, fight (n.), fight (v), fig-leaf, figure, figurehead, file (n.), file (v.), fill, fillet, film, filthy, find, fine, finely, finger, finger-bowl, finger-nail, finish, fire (n.), fire (v.), firecracker, fire-engine, firefly, fire-horses, fireman, fireplace, fireworks, firm, firmly, first (adj.), first (adv.), fish (n.), fish (v.), fisherman, fishhook, fishing-line, fishy, fist, fit (n.), fit (v.), fit (adj.), five, fix, fizz (n.), fizz (v.), fizzle (n.), fizzle (v.), flag, flagon, flake, flame (n.), flame (v.), flaming, flamingo, flannel, flap, flapping, flash, (n.), flash (v.), flashing, flat (n.), flat (adj.), flavor, flax, flaxseed tea, flea, fled, flee, fleece, flesh, flew, flight, flimsy, fling, flipper, flit, flitting, float (n.), float (v.), floating, flock, flood, flooded, floor, flop, Flora, Florence, Florence Court, Florence Nightingale, Florida, Floss, Flossie, flounder, flour, flourish, flow, flower, flower-girl, flower-pot, flowing, fluffy, flung, flutter (n.), flutter (v.), fluttering, fly (n.), fly (v.), flying, flying-machine, fly-swatter, foam (n.), foam (v.), foaming, foamy, foe, fog, foggy, fold, folks, follow, fond, food, fool, fooled, foolish, foolishest, foolishness, foolscap, foot, football, footman, footprint, footstep, footstool, for, forbid, force (n.), force (v.), ford, foreground, forehead, foreign, forest, forever, forget, forget-me-not, forgive, fork, forked, forlorn, forsake, forsythia, fort, forth, fortieth, fortunate, forty, forward, fought, found, foundation, fountain, four, four-leafed, fourteen, fourth, fox, fox-terrier, fragile, frail, fragments, frame (n.), frame (v.), Frank, Franklin, frantic, fraud, Frayser, freckle, free (v.), free (adj.), Freeda, freedom, Freestone-water, freeze, freezer, freezing, freight, freight-car, French, French-dressing, Frenchman, fresh, fretful, fretting, Friar Tuck, Friday, fried, friend, friendly, fright, frighten, frightened, frightful, fringe, frisking, frisky, fro, frock, frock-coat, frog, frolic, from, front, frost, froth, frothy, frown (n.), frown (v.), frowningly, frozen, fruit, fruit-

tree, fry, fuge (huge), full, Fulton, fumble, fun, funeral, funny, furious, furl, furnace, furnish, furniture, furry, further, fury, fuss (n.), fuss (v.), fussy, fuzzy.

Gabble, Gaffer, gaily, gain, gale, gallant, gallery, gallop, gallows-meat, game, Gammer, gap, garage, garbage, garden, gardener, gargle, garment, garniture, garret, garters, gas, gas-fixture, gas-light, gash, gasoline, gasping, gate, gate-way, gather, gathering, gave, gay, gaze, Gee Gee, geese, gee-whiz, gems, general, general (officer), generally, generous, genial, genii, genius, gentle, gentleman, gently, geography, George Eliot, Georgetown, geranium, germs, German (n.), German (adj.), Germany, Gertrude, *Gesundheit,* get, giant, gibberish, giblet, giddy, gift, gigantic, giggling, gilded, gills, gilt, ginger, ginger-ale, gingham, giraffe, girl, give, gizzard, glad, gladly, glance (n.), glance (v.), glare, glaring, glass (n.), Glass (name), glass (adj.), glass-cases, glassful, gleam, gleaming, glide, glimmer, glimmering, glimpse, glistens, glistening, glitter, glittering, gloaming, globe, gloomy, glorious, glory, glossy, Gloucester, gloves, glow, glue (n.), glue (v.), glycerine, Glycothymoline, gnash, gnashing, gnawing, go, goat, gobble, goblet, go-cart, God, godchild, goddess, godmother, going, gold (n.), gold (adj.), golden, Golden-fleece, goldenrod, goldfish, Goldilocks, goldfish, gone, gong, good, good-bye, "gooder," good-humored, goodies, good-natured, goodness, good-night, Goodwin, goose, "goose-cap," Goose-Loose, Gordon, gorgeous, gorgeously, gorgeousness, Gorgons, got, gouged, gown, grab, graceful, gracefully, Grace Street, gracious, grain, grand, grandchild, grandest, grandfather, grandly, grandmother, Grand Prè, grandson, grand-vizier, granite (n.), granite (adj.), grant, grape, grape-fruit, graphophone, grasp, grass, grasshopper, grassy, grate, grateful, grating, grave (n.), grave (adj.), gravestone, graveyard, gravy, gray, grayish, grayish-blue, grayishness, gray-tipped, grazing, grease (n.), grease (v.), greasy, great, Great Falls, great-grandmother, Greece, greedy, Greek, Greeks, green, green-house, greenish, greenish-yellow, Gretel, grew, griddle-cake, Gridley, grieving, Griffin, Grimm, grin, grinning, grind, grizzly bear, groan, groaning, grocer, grocery, groom, *Grossmama, Grosspapa,* grotesque, grotesquely, ground (n.), ground (v.), ground-hog, grounds, grove, grovelling, grow, growl, grown ups, growth, gruel, grumble, grumbling, guard (n.), guard (v.), guess, guest, guest-room, guide (n.), guide (v.), guimpe, guinea-hen, guinea-pig, gull, gulp, gulping, gums, gun, gurgle, gurgling, gushing, gutter, guy, gypsy.

Hack, had, hair, hair-pin, hair-ribbon, hair-tonic, hairy, half, hall, halloo (v.), halloo! Hallow E'en, ham, Hamburg grapes, hammer (n.), hammer (v.), hammock, Hampden, hand (n.), hand (v.), handcuffed, handful, handicap, handkerchief, handle (n.), handle (v.), handsome, handsomer, handsomest, hang, hanger, hanging, hangnail, Hans, Hansel, happen, happily, happiness, happy, Happy Hooligan, Happy-hunting-grounds, harbor, hard, hardened, harder, hardest, hard-hearted, hardly, hark, harm, harmless, harmonica, harness, Harold, harp, harpy, Harrisonburg, harsh, has, hash, hassock, haste, hasten, hasty, hat, hat-box, hat-brush, hatch, hatchet, hate, hateful, hatpin, haughty, haul, have, hawk, Hawthorne, hay, hay-stack, Hayward, hazy, he, head, head-ache, head-foremost, head-rest, head-stone, head-waiter, heal, healthy, Healy, heap (n.), heap (v.), heaping, hear, heard, heart, heart-broken, hearth, hearty, heat (n.), heat (v.), heater, heaven, heaving, heavy, heavy-hearted, hedge, heed, heedless, heel, "Helby," held, Helen, helmet, help (n.), help (v.), helper, helpful, helpless, hem, hen, hen-coop, Henny-penny, her, herald, Herbert Spencer, herd, herdic, Hermann Schmidt, *hermit,* hero, herring, hers, herself, Hesperides, Hester, hexagon, Hiawatha, hiccoughs, hiccoughing, hid, hide,

hideous, hiding-place, high, high-ball, high-school, "hike," hill, hillside, hilt, him, himself, hip, hippopotamus, his, hiss (v.), hiss, hissing, hit, hitch, hither, hive, ho, hoarhound, hoarse, hobble, hobble-skirt, hobby-horse, hoe (n.), hoe (v.), hog, hold, hole, holiday, Holland, Hollander, hollow (v.), hollow (adj.), holly, holly-berry, hollyhock, Holy Land, home, honorable, honest, honestly, honey, honeycomb, honeymoon, honeysuckle, honor, hood, hoof, hook (n.), hook (v.), hook and ladder, hoop, hooping-cough, hoot (n.), hoot (v.), Hooty, hop (n.), hop (v.), hope, Hopkins, hopping, Horace, horizon, horns, horn-shaped, horrible, horribly, horrid, horrified, horrify, horror, horse, horse-back, horse-fly, horse-mint, horse-shoe, hose (n.), hose (v.), hospitable, hospital, host, hostess, hot, hotel, "hot-Scotch," hottest, hour, house, houseboat, household, housekeeper, housemaid, housewife, hover, how, how d'you do, however, howl (n.), howl (v.), howling, huckleberry, huddled, hug (n.), hug (v.), Hugo, hum, human being, human nature, humbug, humming, humming-bird, humorous, hump, Humphrey Ward, humpy, hundred, hunger, hungry, hunk, hunt, hunter, hurdy-gurdy, hurl, hurrah, hurricane, hurry (n.), hurry (v.), hurrying, hurt, husband, hush, husks, hustle, hut, hyacinth, hydra, hydrant, hymn, hypnotize.

I, Iagoo, ibex, ice, ice-bag, ice-berg, ice-chest, ice-cream, ice-cream cone, ice-house, ice-man, icing, icy, idea, identical, idiot, idiotic, idle, idleness, idol, if, ill, ill-mannered, ill-natured, image, imagine, imagination, imitate, imitation (n.), imitation (adj.), immediately, immense, immensely, impatient, impatiently, impertinent, impolite, important, impossible, improper, improperly, improve, improvement, impudence, impudent, impulse, in, in vain, incessantly, incessively (excessively), inch, inconsiderate, inconvenient, incorrect, incredible, incredibly, indeed, independence, index, India, Indian (n.), Indian (adj.), Indian meal, indigestible, indigestion, indignant, indistinct, induce, inducement, industrious, infant, infantry, initials, inflamed, inform, injure, injured, injury, ink, ink-stand, inky, inn, inner, innocent, inquire, insect, inside, insist, insistent, insolent, inspector, instance, instant, instantly, instead, instep, institution, instrument, insufferable, insult (v.), insult (n.), intelligent, intend, intently, interest (v.), interest (n.), interesting, interfere, interfering, interrupt, interruption, intimate, into, intolerable, introduce, invent, invisible, invitation, invite, Ireland, Irish, Irish-potato, iron (metal), iron (flatiron), iron (adj.), iron (v.), iron (n.), ironing, iron-water, irridescent, irritable, irritate, is, Isaac of York, Isegrim, Ishkooda, island, issue, it, Italian (n.), Italian (adj.), Italy, itch, itching, itchy, itself, Ivanhoe, ivory, ivy.

Jabber, jabbering, Jabberwock, jabot, jacket, Jack-Frost, Jack-in-the-pulpit, Jackson, jack-stones, jack-straws, Jacob, jagged, jail (n.), jail (v.), jam (n.), jam (v.), James, Jamestown, Jane, jangling, janitor, January, Japan, Japanese (n.), Japanese (adj.), jar (v.), jar (n.—jolt), jar (n.—pot), Jarley, jaw, jaw-bone, jealous, Jean, Jedediah, jeer, jeers, jeering, Jeff, jelly, Jennings Gap, jerk (n.), jerk (v.), jerkin, Jerusalem, Jesus, jet, jewel, jewelry, Jew, Jewess, Jew's-harp, jiffy, jig, "jiggle," Jim Bloodsoe, Jimmy, jingle (v.), jingle (n.), jingling, Jingo, job, jog, Johnny, John Peel, join, joint, joke, joking, joker, joker (cards), jolly, jolt (v.), jolt (n.), Jones, jonquil, journey, joy, joyful, Juanita, Judas-tree, judge, jug, juggling, juice, juicy, Julia Marlowe, July, jump (n.), jump (v.), jumping Jack, June, jungle, junket, just, juvenile.

Kalb, kale, kaleidoscope, kangaroo, Kann, Karl, Katzen-jammer-Kids, keep, keeper, Kentucky, kept, kerchief, kernel, kettle, key, keyhole, kick (n.), kick (v.), kicking, kid (boy), kid (adj.), kidney, kill, kiln, kind, kindergarten, kindest, kind-hearted, kindness, king, kingdom,

king-fisher, kiss (n.), kiss (v.), Kissengen, kitchen, kitchen-maid, kite, kitten, kitty, klick (n.), klick (v.), Klondike, knap-sack, knave, knead, knee, knee-deep, kneel, kneeling, knelt, knew, knickerbockers, knick-knacks, knife (n.), knife (v.), knight, knit, knitting, knitting needles, knob, knock (n.), knock (v.), knocking, Knopf, knot (n.), knot (v.), knotted, know, knuckle, kodak, Kuhblank.

La! label, labor, laboratory, labyrinth, lace (n.), lace (v.), lacing, lacking, ladder, laddy, ladies' chain, ladies' chair, ladle, lady, lady-bug, lady-finger, lady like, lady-love, laid, Lafayette Square, lake, lamb, lane, lament, lamp, lamp-oil, lance, lancers, land, landed, landing, landing-place, landlady, landlord, landscape, lane, language, lantern, lap, lapping, large, largely, larger, largest, lark, lash, lassie, last (adj.), last (adv.), last (v.), Latane, latch, latch-key, late, lately, "laten," later, latest, lather, Latin, laugh (n.), laugh (v.), laughing, laughable, laughter, launch, laundress, laundry, lavender, law, lawn (n., grass), lawn (adj., cotton material), lay, laziness, lazy, lead (v.), lead (n.), leader, lead-pencil, leaf, leak (n.), leak (v.), leaky, lean (n.), lean (v.), leaning, leap (n.), leap (v.), leaping, learn, learning, least, least-ways, leather, Leather-stocking, leave (n.), leave (v.), leavings, lecture (n.), lecture (v.), led, ledge (n.), ledge (v.), Le Duc, Lee, left (adj.), left (v.), left-handed, leg, legation, leggings, lemon, lemonade, Lempie, lend, length, lent, Leo, leopard, less, lesson, lest, let, letter (A. B. C.), letter (epistle), letter-paper, letter-man, letter-box, lettuce, level, liable, liberty, librarian, library, lick (n.), lick (v.), lid, lie, lief, life, life-boat, lifeless, life-preserver, lift (n.), lift (v.), light (n.), light (v.), light (adj.), lighter, lightest, lighthouse, lightly, lightning, lightning-bug, like (v.), like (n.), like (adj.), likely, likeness, likewise, liking, lilac (flower), lilac (color), Liliputians, lily, limb, limit, limp, limping, Lincoln, line, linen, linger, lining, link (n.), link (v.), lion, lioness, lip, Lippincott, liquid, lisping, list, listen, lit (v.), litter, little, littler, live (v.), live (adj.), liveliest, livelong, lively, liver, living, lizard, Lizzie, load (n.), load (v.), loaf, loathe, lobby, lobster, lock (n., door), lock (n., hair), lock (v.), locket, lockjaw, locust, lodging, loft, lofty, log, Lombardy Street, London, lonely, lonesome, long (adj.), long (v.), Longfellow, longing, look (n.), look (v.), looking-glass, loom, loop, loose (adj.), loose (v.), loosely, loosen, Lord, Lorelei, lose, lost, lot (open ground), lot (quantity), lotion, lots, loud, louder, loudest, loudly, Louis, lounge, love (n.), love (v.), lovelier, lovely, lover, loving, lovingly, low, Lowe, lower (adj.), lower (v.), lowest, low-necked, lozenge, luck, luckily, lucky, Lucy, ludicrous, luggage, lugging, lullaby, lump, lumpy, lunch (n.), lunch (v.), lungs, Luray, lusty, lynx.

Ma'am, Mable, macaroni, macaroon, Macbeth, machine, machinery, mackerel, mad, mad-cap, made, Mademoiselle, madly, magazine, Maggie, magic, magical, magician, magnesia, magnet, magnificent, magnify, magnolia, Magruder, mahogany, maid, maiden, mail (n.), mail (v.), mailman, main, Main Street, Major Butt, make, mallet, malted-milk, Mama, "Mamsie," man, manage, manager, mane, manger, maniac, manicure, manner, manners, mantelpiece, Manx cat, many, map, marble, marbles, march (v.), march (n.), March, March-hare, marching, mare, Marie, marigold, mariner, mark (v.), mark (n.), market, marketing, market-man, market-wagon, marmalade, marquis, marriage, married, marry, marshmallow, Martha, marvellous, Mary, mash, mashed, mask, mass, Massachusetts, massage (n.), massage (v.), mast, master, mat, match (n.), match (v.), mate, material, matter (n.), matter (v.), matting, mattress, Maud, may, May, Mayflower, mayonnaise, me, meadow, meadow-lark, meager, meal (corn), meal (dinner), mean (v.), mean (adj.), meanest, meaning, meant, measles, measure (v.), measure (n.), meat, mechanical, mechanical drawing, medal, meddle, meddle-

some, medicine, Medusa, meet, melt, melting, member, memorandum, men, menagerie, mend, mended, menthol, mention, merchant, merciful, Mercury, mercy, merely, meringue, mermaid, merrily, merry, merry-go-round, mesmerize, mess, message, messenger, met, metal (n.), metal (adj.), method, Methodist, mew, mewing, Mexico, mice, Midas, middle, midnight, midst, might (v.), might (n.), mighty, Mike, mild, Mildred, mile, military, milk (n.), milk (v.), milk-bottle, "milkish," milk-maid, milk-punch, milk-shake, milk-wagon, milk-weed, milky, mill, miller, Miller, million, mill-wheel, "Mimi," mince-meat, mind (v.), mind (n.), mine (pron.), mine (n.), miner, mineral-water, Minerva, mingling, Mingo, miniature, minister, Minnehaha, minnows, Minotaur, mint julep, minute (n.), minute (adj.), miraclious (culous), mirror, mischief, mischievous, miserable, miss, Miss, mistake, mistaken, mistress, misty, mitten, mix, mixture, moan (n.), moan (v.), moccasin, mocking, mocking-bird, model (n.), model (v.), modelling-clay, moderately, modest, modestly, Molly Cotton tail, moment, "Momsey," Monday, money, moisten, monkey, "monkey-doodle," monster, monstrosity, month, monument, moo! mood, moon, moonlight, moose, mop (n.), mop (v.), Mordecai, more, moreover, morning, morning-dress, morning-glory, Morris-chair, Morse, morsel, Moses, mosquito, moss, mossy, most, motorboat, motorcycle, motorman, moth, moth-balls, mother, Mother Goose, Mother Hubbard, mother-in-law, mother-of-pearl, motion, motto, mould, mouldy, mounted, Mount Crescent, Mount Etna, Mount Pleasant, Mount Vernon, mountain, mourn, mournful, mournfully, mourning, mourning-dove, mouse, mouse-trap, mouth, mouthful, move, movement, moving-pictures, mow, mower, Mr., Mrs., much, mucilage, mud, mud-cakes, mud-colored, muddy, muff, muffin, mug, mule, mummy, mummy-case, munch, murder (n.), murder (v.), murderer, murmur (n.), murmur (v.), murmuring, muscle, museum, mush, mushroom, mushy, music, musical, music-book, music-box, musician, muslin, must, mustache, mustard, Mutt, mutter, mutton, mutton-chop, muzzle, muzzled, my, myself, mysterious, mysteriously, mystery.

Nab, Nabisco, nag, nail (n.), nail (v.), nail-brush, nail-polish, nainsook, naked, namby-pamby, name (n.), name (v.), Nana, Nancy, Nannie, nap (n.), nap (v.), napkin, napkin-ring, Narcissus, narrow, narrower, nasturtium, nasty, nation, national, National Museum, native, natural, naturally, nature, naughtiest, naughtiness, naughty, navy, nay, near, nearest, nearby, nearly, near-sighted, neat, "neatening," neatly, necessary, neck, necklace, neckpiece, necktie, Ned, need (n.), need (v.), needle, neglect, negro, neighing, neighbor, neighborhood, neither, Nell, nephew, Neptune, nerves, nervous, nest, nestle, net, netting, never, nevertheless, new, newest, New Jersey, New York, New York Herald, news, newsboy, newspaper, New Year, next, Niagara, nibbling, nice, nicely, nicer, nicest, Nicholas, nickel, nick-name, niece, Nigel, nigger, night, nightcap, nightgown, nightmare, nine, ninepins, nineteen, ninety, ninth, nip (n.), nip (v.), nipple, no, Noah's Ark, nobody, nod, nodding, noise, noisy, Nokomis, none, nonsense, nook, noon, nor, Norfolk, north, northern, Northern Lights, North Pole, north-west, Norumbega Park, nose, nosing, nostril, not, note (n.), note (v.), note-book, note-paper, notes (music), nothing, notice, Nova Scotia, novel, November, now, nowadays, nowhere, nubbin, nude, nudge, nuisance, number, nurse (n.), nurse (v.), nursery, nursemaid, nut, nut-cracker, nut-shells, nuzzle, nymph.

O, oak, oar, oats, oatmeal, obedient, obey, object (n.), object (v.), objection, obligation, oblige, obliging, oblong, obstinate, occasion, occupy, ocean, October, odd, odious, of, off, offer, office, officer, often, ogre, Ogunquit, Oh, oil (n.), oil (v.), oily, ointment, old (n.), old (adj.),

Old English, old-fashioned, Old Glory, old-maid, Old Point Comfort, olive, olive-oil, omega, omelet, on, once, one, one-seated, only, onion, Opechee, open (v.), open (adj.), opening, opera, opera-glasses, (be) operated, operation, opinion, opportunity, opposite, or, orange (n.), orange (adj., color), orange-blossoms, orange-phosphate, orange-stick, orchard, orchestra, order (n.), order (v.), orderly, ordinary, O'Reilly, organ, organist, oriole, ornament (n.), ornament (v.), ornamental, orphan, orphan-asylum, ostrich, other, otherwise, Otis, otter, ouch, ought, our, ours, ourselves, oust, out, outcry, outer, outlandish, out-of-doors, outlook, outrage, outrageous, outside, outskirts, oven, over, overcast, overcoat, overcome, overflow, overshoes, overskirt, ow! Owaissa, owe, owl, owlet, own (adj.), own (v.), owner, ox, oxen, oxygen, oyster.

Pack (n.), pack (v.), package, packing, pad, paddle, paddles, page (leaf), page (boy), paid, pail, pain (v.), pain (n.), painful, painlessly, paint (n.), paint (v.), paint-box, paint-brush, painter, painting, paints, pair, palace, pale, pallisades, palm, palm-tree, pan, pan-cake, Pandora, pane, panel, pansy, pant, pantaloon, panther, panting, pantry, pap, papa, paper, papoose, paprika, parade (n.), parade (v.), Paradise, parasol, pardon, parents, Paris, park, Parker House, parlor, parlor-car, Parmesan-cheese, parquetry, parrot, parsley, part (n.), part (v.), Parthenia, particle, particular, particularly, parting, partner, party, party dress, pass, passage, passé, passenger, passion, passionate, past, paste (n.), paste (v.), pasteboard, pastry, pasture, pat (n.), pat (v.), patch (n.), patch (v.), path, pathetic, Pathfinder, pathway, patience, patient (adj.), patient (n.), patiently, patrol-wagon, patter, pattering, pattern, Paul, Paul Revere, Pauline, paved, pavement, pavilion, paw (n.), paw (v.), pawn, pay (n.), pay (v.), pea, peace, peaceful, peacefully, peace-pipe, peach, "peacherine," peacock, peanut, pear, pearl, pearly, peck (n.), peck (v.), peculiar, pedal, pedamobile, peddler, pedestal, peel (v.), peel (n.), peeling, peep (v.), peep (n.), peering, peg, Pegasus, pegged, pelican, pen, pencil, pendant, Penelope, Penguin, pen-knife, penny, penny-royal, pentagon, people, pepper, peppermints, peppery, perceive, perch, perched, perfect, perfectly, perform, performance, performing, perfume, perhaps, period, perished, perk, permission, permit, Perseus, Persian, persimmon, persist, person, personage, perspiration, perspire, persuade, pert, pest, pester, pet (v.), pet (n.), petal, Pete, Petens, Peter, Petersburg, petticoat, pheasant-hen, Philadelphia, Philamon, Philip, Philippines, philosophy, phone (n.), phone (v.), phonograph, photograph, piano, pianist, piazza, pick, pick-a-back, pickled, pickles, picnic, picture, picture-frame, picturesque, pie, piece, pier, pierce, pig, pigeon, piggish, pig-headed, pig-sty, pig-tail, pile (n.), pile (v.), Pilgrims, pill, pillar, pillow, pillow-case, pimple, pin (n.), pin (v.), pinafore, pinch, pincushion, pine (n.), pine (v.), pine-apple, pine-cone, pink, "pink-eye," pint, pipe, pips, pirate, pirates' flag, pistol, pit, pitch, pitcher, piteously, pith, Pittsburg, pity (v.), pity (n.), placard, place (n.), place (v.), plaid, plain (n.), plain (adj.), plainer, plainly, plait, "plak" (play), planet, plank, plant (n.), plant (v.), plaster (n.), plaster (v), plate, platform, platter, play (games), play (music, v.), play (n.), playful, playmate, playthings, pleading, pleasant, pleasantly, please, pleasure, pleat, pleated, pleates, plenty, plot, plucked, plum, plum-cake, plumed, plumes, plump, plumpest, plunge (n.), plunge (v.), plus, poach, poached, Pocahontas, pocket, pocket-book, poem, poh, point (v.), point (n.), pointed, pointing-finger, poise, poison (n.), poison (v.), poison-ivy, poisonous, poke (n.), poke (v.), poker, (rod), poker (game), Polar-bear, pole, policeman, polish (v.), polish (n.), polished (adj.), polite, politely, polka-dot, pompon, pond, pony, pony-cart, pool (game), poor

(n.), poor (adj.), pop, pop-corn, "Popsy," "Popsy-wopsy," porch, porcupine, pork, porridge, porter, Porter, portrait, Portuguese, position, positively, possess, possession, possible, possibly, possum, post (v.), post (n.), postal, postman, postoffice, postpone, pot, potato, Potomac, pottering, pottery, Potts, pounce, pound (n.), pound (v.), pounding, pour, powder (n.), powder (v.), powder-box, powdered, powder-puff, powdery, power, practically, practise (music), prairie-dog, praise, praises, prance, prancing, prate, pray, prayers, prayer-book, preach, preacher, precious, prefer, preparations, prepare, prescribe, prescription, presence, present (n.), present (v.), present (adj.), presently, preserve, preserves, preserved, president, press, Preston, presume, pretence, pretend, prettier, prettiest, prettily, pretty, pretzel, prevent, price, prick, prickle, prickles, priest, prim, primer, prince, princess, princess-slip, principal, print (n.), print (v.), printed, printing, prism, prison, prisoner, private, privately, prize (v.), prize (n.), probable, probably, proceeding, procession, proclaim, produce, profile, profound, program, projection, promise (n.), promise (v.), prompt, promptly, prone, pronounce, prop, proper, properly, proposition, Proserpina, "Prosit," protect, protected, protest, provisions, prunes, pshaw, Psyche knot, public (n.), public (adj.), publish, pudding, puddle, puff (n.), puff (v.), puff-ball, puffed-rice, puffing, pugh, pull (n.), pull (v.), pullet, Pullman-car, pulp, pulpit, pulse, pumice-stone, pump (n.), pump (v.), pumpernikel, pumpkin, pumpkin pie, punch (n.), punch (v.), punch (n.,drink), Punch and Judy, punch-bowl, punch glasses, punish, punishment, pupil, puppy, pure, purely, Puritans, purple, purpose, purr, purring, purse, pursued, push (n.), push (v.), pusher, puss, Puss-in-boots, pussy-cat, pussy-willow, put, puzzle, puzzling, pyjamas, pyramid.

Quack, quacking, quail, quantity, quarrel (v.), quarrel (n.), quarrelsome, quarry, quart, quarter, que, queen, Queen Anne's lace, queer, queerest, quench, question, quick, quicker, quickest, quickly, quicksilver, quiet (n.), quiet (adj.), quietly, Quilp, quilt, quit, quite, quiver.

Rabbit, raccoon, race, racing, racket, rackety-packety, radiator, radish, rag, rage, raging, ragged, ragman, railroad, rain, raining, rainbow, raincoat, rainy, raise, raisin, rake, raking, ram, ran, rang, Rapidan, rapid, rapidly, rapture, rascal, rat (animal), rat (hair), rate, rather, rattle (n.), rattle (v.), rattlesnake, ravel, raveling, raw, ray, reach, (n.), reach (v.), read, readily, reading, ready, real, real-life, realize, Rear-admiral, rearing (adj.), rearing (v.), reason, Rebecca, receipt, receive, reckless, reckon, reception, reciprocated, recognize, record, recover, rectangle, red, Red-coats, Red Cross, reddish, reddish-yellow, red-hot, "rediclious," red-start, Red Riding Hood, reform-school, refreshing, refreshments, refuse, register, "regliar" (regular), regret, rehearsal, relation, relatives, relief, relieve, remain, remember, remind, repeat, repeatedly, reply (v.), reply (n.), reproach, request, rescue (n.), rescue (v.), resent, reservoir, residential, resistance, resisted, resolution, resolved, respect, respectable, respectful, responsible, rest (n.), rest (v.), restaurant, restful, resting-place, restless, restlessly, restore, result (n.), return (n.), return (v.), revive, revolver, reward (n.), reward (v.), Reynard, Reynard le Subtil, Reynolds, rhinoceros, rhomboid, rhubarb, rhyme (n.), rhyme (v.), rib, ribbon, rice, rich (n.), rich (adj.), Richard Coeur de Lion, riches, richly, Richmond, rid, riddle, ride (n.), ride (v.), rider, riding, rifle, right (not left), right (correct), right angle, rim, rind, ring (n.), ring (v.), ring-finger, ringing, ringlets, rip, ripe, Rip Van Winkle, rise, rising, river, road, road-side, roaming, roar (n.), roar (v.), roaring, roast, roast-beef, roasting, rob, robber, robber-band, robe, Robert, Roberta, robin, Robin Hood, "Ro-Bo," rock (n.), rock (v.), Rock Creek Park, rocking-chair, rocking-horse, rocky, roe-buck, roll (n.),

roll (v.), roller-coaster, roller-skates, rolling, roly-poly, Roman, romancing, Rome, romp (n.), romp (v.), rompers, romping, roof, roof-garden, room, Roosevelt, rooster, root, rooting, rope, rosary, rose (n.), rose (v.), Rose, rose-leaf, rosette, rosy, rotten, rough, roughest, "rough-house," round (adj.), round (prep.), row (n.), row (v.), rowboat, Rowena, Roxana, Roxie, royal, rub, rubber, rubber-band, rubbers, rubbish, ruby, rude, rudely, rudeness, ruder, rudest, ruffian, ruffianly, ruffle, ruffled, rug, ruined, ruins, rule (n.), rule (govern), rule (draw), ruler (monarch), ruler (stick), rumple, rumpled, Rumpel-Stiltzschen, run, rung, runners, running, rush, rushes, rushing, Russian, rust (v.), rust (n.).

Sack, sacque, sacred, sacrifice (n.), sacrifice (v.), sad, saddest, saddle (n.), saddle (v.), sadly, sadness, safe, safety, safety-pin, Sage, sail (n.), sail (v.), sailboat, sailing, sailor, sailor-collar, saint, sake, salad, Sally Anne, salt, salt-cellar, salty, salute (n.), salute (v.), same, Sampson Brass, sanatorium, sand, sand-heap, sandal, sandwich, sandy, sapphire, sappy-head, Saracen, Sarah Bernhardt, Sargent, sash, sat, satisfy, saucer, saucy, Saunders, sausage, savage (n.), savage (adj.), save, saw (n.), saw (v.), sawdust, saxifrage, Saxon, say, scalawag, scald, scalding, scale (music), scale (weight), scalp (n.), scalp (v.), scamp, scar, scarce, scarcely, scare, scare-crow, scared, scarf, scarlet, scarlet-tanager, scat, scatter, scene, scenery, sceptre, scheme, Schmidt, Schneider, scholar, school, school-day, school-house, school-mate, school-teacher, schooner, Schweitzer cheese, scientific, scissors, scold, scolding, scoop (n.), scoop (v.), scoot! scorn (n.), scorn (v.), Scotch, Scotchman, Scotland, Scott, scowl, scramble, scrambled eggs, scrap, scrape, scratch (n.), scratch (v.), scream (n.), scream (v.), screaming, screech, screeching, screen, screw (n.), screw (v.), scribble, scribbling, scrub, scrubbing, scrubbing-brush, sea, sea-gull, seal (n.), seal (v.), search, Searle, seashore, season, seat, seated, second (n.), second (adj.), secret (n.), secret (adj.), secretary, secretly, sedately, see, seed, seedless, seek, seem, seen, see-saw, seize, select, self, selfish, selfishly, sell, semicircle, send, sense, sensible,sent, sentinel, separate (adj.), separate (v.), September, serious, seriously, servant, servant-girl, serve, set (in), set (v.), settle, seven, seventeen, seventeenth, seventh, seventy, several severe, severely, sew, sewer, sewing, sewing-case, sewing-machine, sewing-woman, sexton, shabby, shade (color term), shade (shadow), shade (v.), shades (blinds), shadow, shady, shaft, shaggy, shake (n.), shake (v.), shaking, shall, shallow, shame, shameful, shampoo (n.), shampoo (v.), shamrock, shape, shaped, share (n.), share (v.), sharp, sharpen, sharper, shave, shawl, she, shed (v.), shed (n.), sheep, sheer, sheet, shelf, shell (n.), shell (v.), shelter, Shenandoah, shepherd, Shepherds', Shetland pony, shield, shift, shine (n.), shine (v.), shining, shiny, ship (n.), ship (v.), shipwreck, shirt, shiver (n.), shiver (v.), shivering, shock, shocked, shocking, shoe (n.), shoe (v.), shoemaker, shoestore, shoo, shook, shoot, shop, shopgirl, shopkeeper, shopping, shore, short, shorter, shortest, shot (n.), shot (v.), should, shoulder, shoulder-blade, shout (n.), shout (v.), shouting, shove (n.), shove (v.), shovel (n.), shovel (v.), show (n.), show (v.), shower, shower-bath, shredded, shrewd, shriek, shrieking, shrill, shrivelled, shrug (n.), shrug (v.), shudder (n.), shudder (v.), shuffle, shuffling, shut (v.), shut (adj.), shutter, shy, shyness, sick, sickening, sickly, sickness, side, sideboard, sidewalk, side-ways, Sidney, sieve, sift, sifter, sigh (n.), sigh (v.), sighing, sign (n.), sign (v.), signal, silence, silent, silently, silk (adj.), silk (n.), silken, silky, sill, silly, silver, silvery, simple, simpler, simpleton, simply, since, sincerely, sing, singer, singing, single, singular, sink (n.), sink (v.), sinking, sip (n.), sip (v.), siphon, sir, sirup, sister, Sisters, sister-in-law, sit, sitting-room, six, sixteen, sixteenth, sixth,

sixty, size, sizzle, sizzling, skate, skates, skedaddle, skidoo, skeleton, skiff, skilful, skim, skin (n.), skin (v.), skip (n.), skip (v.), skipper, skipping, skull, skurry, sky, slam (v.), slam (n.), slang, slanting, slap (n.), slap (v.), slap-dash, slate, slave (n.), slave (v.), slay, sled, sleep (n.), sleep (v.), sleeper, sleeping, sleeping-car, sleepy, sleepy-head, sleet, sleeve, sleigh, slender, slew, slice (n.), slice (v.), slick, slid, slide, slided, slight, sling, slip, slipper, slippery, slit (n.), slit (v.), slobber, slobbering, slow, slow-down, slowly, slumber, slumbering, slush, slushy, sly, slyly, smack (n.), smack (v.), small, smaller, smallest, smart (adj.), smart (v.), smash, smear (n.), smear (v.), smeary, Smedes, smell (v.), smell (n.), smelling, smelly, smelt (n.), smelt (v.), smile (n.), smile (v.), smiling, smoke (n.), smoke (v.), smoking, smoky, smooth (adj.), smooth (v.), smother, smut, Smutty, snack, snail, snake, snaky, snap, snapshot, snatch, sneak, sneaking, sneeze (n.), sneeze (v.), snip, snipe, snippers, snoodles, snooze, snoozing, snore, snoring, snort, snorting, snout, snow, snowing, snowball, snowman, snowy, snub-nose, snuff, snug, snuggle, so, soak, soaking, soap (n.), soap (v.), soap-bubble, soapy, sob (n.), sob (v.), sobbing, sock, soda, soda-water, sodium-phosphate, sofa, soft, softening, softly, sold, soldier, soldier-boy, soldier-cap, solemn, solemnly, solid (n.), solid (adj.), solitaire, solitary, some, somebody, somehow, somersault, something, sometime, sometimes, somewhere, son, song, song-sparrow, son-in-law, soon, soot, sooty, sopped, sorcerer, sore (adj.), sore (n.), sorely, soreness, sorrow, sorrowful, sorrowfully, sorry, sort (v.), sort (n.), Sothern, sought, soul, sound (n.), sound (adj.), soundly, soup, soup-plate, sour, sour-kraut, south, South America, souvenir, sow, space, spade, Spain, spangled, spangles, Spaniard, Spanish, spank, spanking, spare (adj.), spare (v.), spark, sparkle, sparklet, sparkling, sparrow, speak, spear, special, specially, speck, speckled, spectacle, spectacles, speech, Speedwell, spell (n.), spell (v.), spelling-book, Spence, spend, spent, Sphinx, splice, spicy, spider, spider-web, spigot, spill, spin, spinach, spine, spinning-wheel, spirit, spit, spitting, splash (n.), splash, (v.), splashing, splendid, splendidly, splinter, split, spoil, spoiled, sponge, sponge-cake, spoon, spoonful, spot, spotted, Spotty, spout, sprained, sprawling, spread (n.), spread (v.), spree, sprig, spring (water), spring (jump), spring (v.), Spring, spring-beauties, spring-house, spring-water, sprinkle, sprout (n.), sprout (v.), spruce, spry, spun, spur (n.), spur (v.), spurt, spy, spy-glass, squabble, square (n.), square (adj.), squash (n.), squash (v.), squat, squatting, squaw, squeak (n.), squeak (v.), squeaking, squeal (n.), squeal (v.), squealing, squeeze (n.), squeeze (v.), squire, squirrel, squirt, stab, stable, stack (n.), stack (v.), staff, stage, stage-coach, stagger, stain (n.), stain (v.), stair, staircase, stalactite, stalagmite, stale, stalk, stammer, stamp (letter), stamp (pound), stamps, stand (n.), stand (v.), standing, Staples, star, starch (n.), starch (v.), stare, star-light, start (n.), start (v.), startle, starve, starving, St. Aspinquid, state, stately, state-room, station, station-house, statue, Staunton, stay, steady, steak, steal (rob), stealing (creeping), steam, steam-boat, steam-cars, steam-engine, steaming, steam-pipes, steam-whistle, steed, steel, steep, steepest, steeple, steer, steering, stem, step (n.), step (v.), step-father, Stephen, step-ladder, step-mother, stepping-stones, step-sister, stern, St. Gaudens, stick (v.), stick (n.), sticking-plaster, stick-pin, sticky, stiff, stiffen, still (yet), still (quiet), sting (n.), sting (v.), stir, stirrup, stitch (n.), stitch (v.), St. Margaret's, Stokesville, stomach, stomach-ache, stone, stone-cold, stone-work, stony, stool, stoop, stop (n.), stop (v.), stopper, storage, store, store-keeper, store-room, stork, storm (n.), storm (v.), stormy, story (tale), story (house), story-book, story-teller, stove, stowaway, straight, straighten, strange, stran-

ger, strap, Strauss, straw, strawberry, straw-hat, streak, streaky, stream, streaming, street, strength, strenuous, stretch, stretcher, Stribling Springs, strictly, striding, string (n.), string (v.), stringy, strip, stripe, striped, stroke (n.), stroke (v.), strong, stronger, strongest, struggle (n.), struggle (v.), struggling, study, stuff (n.),, stuff (v.), stuffing, stumble, stump, stupid, stupidity, stupidly, sturdy, St. Valentine's day, sty (pen), sty (ulcer), style, stylish, subway, succeed, success, successful, such, suck, sucking, sudden, suddenly, suffer, suffering, sufficient, sufficiently, suffocate, suffocatingly, sugar, sugared, sugary, suggest, suit (v.), suit (n.), suitable, suitcase, sultan, sultry, sumach, summer, summer-house, summery, sun, sunbeam, sunburned, Sunday, Sunday-school, sunk, sunset, sunshine, sunshiny, superb, superbly, superintendent, superior, supper, supply, suppose, sure, surely, surf, surface, surgeon, surgical, surname, surprise (n.), surprise (v.), surprising, surround, Susan, suspect, suspenders, swallow (bird), swallow (n.,drink), swallow (v.), swan, swan's down, swarm (n.), swarm (v.), swat, swatter, sway, sweater, sweating, sweep, sweet, sweet-bread, sweeten, sweetheart, sweetly, sweetly-pretty, sweetness, sweet-potato, sweets, swell, swelling, swift, swiftly, swim (n.), swim (v.), swimmer, swimming, swimming-pool, swing (n.), swing (v.), swinging, Swiss, switch (n., tracks), switch (n., stick), switch (v.), Switzerland, swoon, swoop, sword, sycamore, syphon, syrup.

Table, tablecloth, tablecover, table-manners, tablespoon, tablet, tack (n.), tack (v.), Taft, tag (v.), tag (n.), tail, tailor, take, talcum powder, tale, talk (n.), talk (v.), talker, tall, tambourine, tame (adj.), tame (v.), tamer, Taming of the Shrew, tan (n.), tan adj.), tan (v.), tandem, tangle, tangled, tank, tankard, tantrum, tap (n.), tap (v.), Tap, tape, tape-measure, taper (n.), taper (adj.), tapestry, tapioca, tapping, Tapster, Tarr, tarradiddle, tarred and feathered, task, tassel, taste (n.), taste (v.), Tattycorum, taught, tavern, taxicab, tea, teach, teacher, tea-cup, team, tea-party, tea-pot, tear (n.), tear (v.), tears, tease (n.), tease (v.), tea-set, teasing, teaspoon, teatable, Teco, Teddy, Teddy-bear, teeny, teeter-tauter, teeth, teething, telegram, telegraph-pole, telegraph wires, telephone (n.), telephone (v.), telescope, tell, temper, temperate, temperature, temple (building), temple (forehead), ten, tender, tender-hearted, tenderly, tennis, tennis-court, tennis-ball, tennis-racket, Tennyson, tent, tenth, terrace, terrapin, terrible, terribly, terrified, terrify, terror, tête à tête, than, thank, thankful, thanks, Thanksgiving, that, thawing, the, theatre, theatrical, thee, their, them, Theo, themselves, then, there, therefore, thermometer, these, they, thick, thicker, thickest, thickly, thief, thimble, thin, thing, think, third, thirsty, thirteen, thirteenth, thirtieth, thirty, this, thistle, Thompson-Seton, thorn, thorny, thorough, thoroughly, those, thou, though, thought (n.), thought (v.), thoughtful, thousand, thread (n.), thread (v.), threaten, threatening, three, three-branched, three-pronged, throat, throne, through, throw (n.), throw (v.), thrush, thrust, thumb, thumb-nail, thump (n.), thump (v.), thunder (n.), thunder (v.), thunder-storm, Thursday, thus, thy, thyself, tick (n.), tick (v.), ticket, ticking, tickle, ticklish, tick-tack, tide, tidy, tie (n.), tie (v.), tiger, tight, tighten, tightly, tight-rope, tights, tile, till, tilt, time, time-being, time-table, timid, tin, ting-a-ling, tingle, tink-a-tink, tinkle, tiny, tip (n.), tip (v.), tippet, tip-toe, tip-top, tire, tired, tiresome, tissue-paper, Titanic, to, toad, toad-stool, toast, tobacco, Tobias, Toby, today, toddling, toe, together, toil, toiling, toilet (n.), toilet (adj.), told, toll, Tom, tomahawk, tomato, tomb, tomboy, tombstone, Tommy-Atkins, tomorrow, tone, tongs, tongue, tonic, tonight, too, took, tool, toot, tooth, toothache, toothbrush, toothless, toothpick, toothpowder, tooting, top (upper),

top (toy), top-knot, topple, topsy-turvy, torch, tore, torment (n.), torment (v.), tormenting, tornado, torpedo, torrent, tortoise, torture (n.), torture (v.), toss, tossing, tot, total, totally, tote, tottering, touch (n.), touch (v.), tough, toughest, tournament, tourney, tousle, towards, towel, tower, Tower Hill, towering, town, toy (n.), toy (adj.), toy-shop, trace (n.), trace (v.), tracing, track, tradesman, tragedy, tragic, trail, trailing, train (cars), train (dress), train (v.), trained, trained-nurse, trainer, traitor, tramp, tramping, trample, transform, transom, trap (n.), trap (v.), trap-door, trapeze, trash, trash-barrel, travel, traveller, travels, tray, treacherous, tread, treadle, treasures, Treasury, treat (n.), treat (v.), treatment, tree, tree-frog, tremble, trembling, tremendous, tremendously, trench, Trenton, tressel, tresses, trial, triangle, trick, trick (in cards), trickle, trickling, trickster, tricky, tricycle, trifle, trigger, trillion, trim, trimming, trip (n.), trip (v.), trod, Trojans, trolley, troop, trot, troubadour, trouble (n.), trouble (v.), troublesome, trough, troupe, trousers, trowel, Troy, truck, trudging, true, truly, trump, trumpet (n.), trumpet (v.), trumpeter, trumpet-shaped, trunk (box), trunk (proboscis), trunk (tree), trust, trustworthy, trusty, truth, truthful, try, trying, tub, tube, tuck (n.), tuck (v.), Tuesday, tuft, tugging, tulip, tumble (n.), tumble (v.), tumbler, tune (n.), tune (v.), tuner, tunnel, turban, Turk, turkey, turkey-trot, turn (v.), turn (n.), turning, turnip, turpentine, turtle, tusk, tut! tu-whit, tu-whoo, twaddle, tweak, twelfth, twelve, twentieth, twenty, twice, twig, twilight, twin-colds, twinkle (n.), twinkle (v.), twinkling, twins, twirl, twist, twisted, twitter (n.), twitter (v.), twittering, two, typewriter (person), typewriter (machine), typhoid-fever.

Ugly, uglier, ugliest, Ulysses, umbrella, unbutton, Uncas, uncle, uncomfortable, uncover, under, under-body, underclothes, underground, underneath, understand, undertake, undo, undress, uneasy, unfold, unfortunate, unfortunately, unfurl, ungrateful, unhappy, unhealthy, unicorn, union, Union Station, unique, United States, unkind, unless, unlock, unpack, unpainted, unravel, unripe, unspeakable, unthreaded, untidy, untie, until, up, up-a-daisy, "upjar" (pitcher), Upjohn, upon, upper, uprooted, upset, upside, up-stairs, uptown, "Urachet," urchin, urging, us, use (n.), use (v.), useful, usher, usquebaugh, usual, usually, utter (adj.), utter (v.), utterly.

Vacant, vacation, vaccinate, vaccination, vain, valentine, valiant, valise, valley, valuable, value, vanilla, vanish, vanquish, variety, varnish, vase, vaseline, vaudeville, veal, vegetable, veil, vein, velvet, velveteen, Venetian blinds, vengeance, venison, venison-pasty, venture (n.), venture (v.), Venus, veranda, vermicelli, verse, very, vessel, vest, vex, viaduct, vice, Vichy, vicious, Victoria, victorious, view, vigorous, village, villain, villainous, vine, vinegar, violent, violet, violin, violinist, Virgin, Virginia, visit (n.), visit (v.), visiting-card, visitor, voice, vote, vulgarian.

Wabble, waddle, waddling, wafer, wag, waggle, wagon, wah, wailing, waist, wait (n.), wait (v.), waiter, waitress, waive, wake, walk (n.), walk (v.), wall, wallet, wall-paper, walnut, wand, wander, wanderer, want (n.), want (v.), war, war-club, ward, war-dance, Wardensville, warwhoop, warm (adj.), warm (v.), warn, warning, war-paint, warrior, wart, was, wash (n.), wash (v.), washboard, wash-day, washerwoman, Washington, Washington Monument, Washington Post, wash-rag, wash-stand, wash-tub, wasp, waste (v.), waste (adj.), wastebasket, watch (v.), watch (n.), watch-dog, water (n.), water (v.), water-baby, water-cress, water-fall, watering-pot, water-lily, watermelon, water-proof, water-snake, water-wings, watery, wattles, wave (n.), wave (v.), waving, wax (n.), wax (adj.), wax-works, way, wayside,

we, weak, weakly, weapons, wear, weary, weasel, weather, weave, web, wedding, wedding-gown, wedding-guests, Wednesday, week, weep, weeping, weeping-willow, weigh, weight, welcome (v.), welcome, (adj.), well (n.), well (adj.), well-bred, Welsh-rabbit, Wendell, went, wept, were, wet (v.), wet (adj.), wetting, whale, wharf, what, whatever, wheat, wheat-field, wheel (n.), wheel (v.), wheelbarrow, when, whenever, where, whereabouts, wherever, wheatena, whether, whew, whey, which, while, whimpering, whine, whining, whinny, whip (n.), whip (v.), whipping, whippoorwill, whirl, whisk, whiskered, whiskers, whiskey, whisper (v.), whisper (n.), whistle (n.), whistle (v.), white (n.), white (adj.), White House, White Mountains, Whitey, who, whoa, whoever, whole (n.), whole (adj.), whom, whoop (n.), whoop (v.), whooping cough, whose, why, wicked, wickedly, wickedness, wicker, wide, widest, width, wife, wig, wiggling, wigwam, wild, wildcat, wildest, wildness, will (n.), will (v.), William, willing, willingly, Willis, willow, wilted, win, Winchester, wind (n.), wind (v.), winding, windmill, window, window-frame, window-sill, windward, windy, wine, wine-glass, wine-sap, wing, wing-bone, winged, wink (n.), wink (v.), winner, Winston, winter, wintergreen, wipe, wire, wisdom, wise, wisely, wish (n.), wish (v.), wish-bone, witch, with, wither, withered, without, wits, wizard, wolf, woman, won, wonder (v.), wonder (n.), wonderful, wondering, wood, wood-box, wood-cutter, wooden, woodpecker, woods, wool, wool-gathering, woolen, woolly, word, wore, work (n.), work (v.), workbag, workbasket, workman, world, worm, worn, worn-out, worried, worry (v.), worry (n.), worse, worser, worst, worsted, Wortens, worth, worthless, Wortsey, would, wound (n.), wound (v.), wounded, woven (adj.), woven (v.), wrap, wrapper, wreath, wreck (n.), wreck (v.), wren, wrench, wrestle, wretch, wretched, wriggle, wriggling, wring, wringing wet, wrinkle, wrinkled, wrinkles, wrist, write, writing, writing-case, writing-paper, wrong, wrote.

Yacht, yak, yard (measure), yard (garden), yarn, yarrow (flower), Yarrow (name), yawn (n.), yawn (v.).

THE LANGUAGE OF A THREE-YEAR-OLD CHILD

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The increasing recognition of the importance of all phases of child study is sufficient excuse for the investigation described in the following pages. If the results of this study should stimulate some one else to "go and do likewise," thus adding to the small fund of reliable information on this subject now available, so that finally there may be enough material from which to formulate some valid principles concerning the early stages of linguistic development, then this effort will have been of some value.

Biography—Just as any phenomenon is more accurately interpreted when studied in connection with its surroundings, so the vocabulary or language of a child at any particular period becomes more instructive when accompanied by at least some description of the conditions under which the language has developed. Accordingly, with the aid of G's mother, I have made out the following biographical sketch of our child, Gladys, giving only those points which I consider of interest in such a study.

G's life so far has been quiet and uneventful, in every respect that of an ordinary normal child.[1] She was born and lived during the first thirty-one months in a small town near Denver, Colorado. During the next three months, with her parents, she visited relatives in various parts of Iowa, coming in contact with many different people, scenes, and situations. This naturally brought many new words, especially proper nouns, into her vocabulary. Since that time until now (she is now, March 24, 1914, forty-one months of age) we have lived in Boulder, Colorado.

G's weight at birth was six pounds; at ten months, seventeen pounds; at twenty-two months, twenty-three pounds: and at thirty-eight months, twenty-nine pounds. She walked with a chair at twelve months; walked alone at sixteen months; cut her first two teeth at nine and a half months. Though

[1] G is of Scotch-German descent on the father's side and of Swedish on the mother's. Both parents are college graduates; the father is and has always been in educational work, while the mother was a high-school teacher for some time before her marriage.

small, G has always been well and strong except for one very serious sickness due to indigestion, which lasted about a month; this occurred in the eleventh and twelfth months. Being an only child, she has played very little with other children except during the thirty-fifth, thirty-sixth and thirty-seventh months when she had as playmates, two neighbor children, a boy of four and a half years and a girl of three. Since the thirty-seventh month she has played with the boy about a half hour a day. Her toys have been few and of a simple, inexpensive kind, their total value being between five and six dollars.

The first word pronounced with evident understanding was "bye-bye" at ten months. Some syllables had been uttered quite distinctly previous to this, but probably unintelligently. At twelve months the words "Papa," "Mamma" and "Baby" were distinctly pronounced. From this time on, the development was steady, but rather slow up to the end of the second year, four-word sentences being rarely used at this time. About the twenty-sixth month began a period of rapid development both in the use of new words and in clearness of enunciation, together with a gradual increase in the length of sentences. This period has really continued up to the present, the only interruption being the three months during which she played a great deal with the two children mentioned above. These three months were marked by unmistakable deterioration in sentence structure and in the number of different words used. This was so noticeable that both G's mother and I spoke of it repeatedly at the time.

We have never urged her to talk and little attention has been given to her language except that her questions in regard to the use of words have always been answered. In addition to this, her mother has, so far as time permitted, been careful to correct her grammatical errors. "Baby talk" has been scrupulously avoided in her presence and, likewise, it was not used by her until she played with the other two children, one of whom talked in a very "babyish" way. I shall discuss this more fully in another section.

Method—The method used in obtaining G's vocabulary was practically the same as that employed by Professor Guy M. Whipple in taking the vocabulary of his three-year-old child (58). A booklet of twenty-six pages was prepared, one page for each letter of the alphabet. A period of ten days was set apart for observing and recording the words used. At the close of this period followed a two-week period of searching such other child vocabularies as could be obtained, as well as the dictionary, to secure words which, it was thought,

might have been used by the child, had the proper situation arisen. When such a word was found, it was not used in G's presence, but a situation was produced intended to call forth the word, in case she was accustomed to use it; e. g., when the word "whistling" was being considered, I began whistling and G was asked, "What is Papa doing?" To this she at once replied, "He is whistling." In a similar manner each doubtful word was tested. Following this, a list was made of the words used by the child during various periods prior to this, but which had been forgotten, or which could not be recalled because of lack of proper environment. During the preceding summer, for example, such words as "mosquito," "cantaloupe" and "watermelon" were often used, but gradually as the object passed from her experience, these words were no longer used.

Principles—Following the practice of Professor Whipple and other modern child-psychologists, I have included in the vocabulary all verb forms, compounds, and inflections except the plurals of nouns, which G uses. Nursery rhyme terms and words used without any appreciation of their meaning have been omitted.

Vocabulary—As stated above I have divided the vocabulary into two parts, the one consisting of those words which G uses in her every-day affairs and which might be termed her active or conscious vocabulary; the other consisting of those words which she has known and used in the past, but does not seem to use at present; this might be called her sub-conscious vocabulary. The entire vocabulary contains 2282 words distributed among the different parts of speech as follows: nouns 1171, verbs 732, adjectives 198, adverbs 98, pronouns 36, prepositions 20, interjections 15, conjunctions 12.

The part of G's vocabulary which I have termed the sub-conscious because it is made up of words which are apparently stored away or "pigeon-holed" in sub-consciousness, brings out some interesting facts: it contains 183 words divided among the parts of speech as follows: nouns 145, verbs 25, adjectives 9, adverbs 3, interjections 1. Comparing this summary with that of the entire vocabulary we find that of every eight nouns which G learned one was "pigeon-holed," while of the verbs only one out of every thirty-three acquired was thus stored away. We may deduce from this the following facts:

1. The process of acquiring and storing away words to be used only in particular seasons or upon particular occasions

is begun very early, probably as soon as the child begins to learn words.

2. The process of storing away words goes on much faster in the case of nouns than in the case of any other part of speech.

3. Few words aside from nouns once learned by the child are forgotten.

In arranging G's vocabulary according to the parts of speech, I am well aware of the psychological incorrectness of such a classification inasmuch as children seldom use words entirely with respect to their grammatical functions as has been clearly shown by Dewey (12), O'Shea (39), and others. However it would be exceedingly difficult, if not impossible, to make a strictly psychological classification since the child is not nearly always grammatically consistent in the use of words. In the very early stages of speech-development, one word may answer for all parts of speech, while at the age of three or four years one part of speech is transformed into another to suit the needs of the occasion. For example, as G was eating her oatmeal and splattered some milk on her dress, she said, "There, Mr. Splatter, now see what you went and done;" but the following day she said to her mother, "Now be careful, Mamma, or you'll splatter milk on your dress." Again she said, "See, Papa, I put the hammer-pound back on," "hammer-pound" being her own invention meaning the head of the hammer; but in the next sentence, "Now I'm going to pound these nails," she uses "pound" with its regular verbal function. At another time when she hurt her hand, she exclaimed, "See my 'skinned.'" Yet I am convinced that at three years of age, G used a large percentage of her words according to their grammatical functions even though it was in a purely objective and imitative manner.

There has been much speculation as to the significance of the seeming preponderance of the verb element in child vocabularies, the general conclusion being that it indicates in the developing mind a predominating interest in action and hence in action words (Tracy, Kirkpatrick and others). This conclusion seems to me quite unwarranted for the following reasons: (1) The child acquires his vocabulary almost wholly through imitation. (2) It is a well known fact that any part of speech may be and often is an action word to the child. (3) The percentages of the different parts of speech, (if one counts the verb forms printed in small capitals) in the dictionary are about as follows: nouns 48.4%, verbs 27.5%, adjectives 18.6%, adverbs 4.9%, pronouns .2%, prepositions .1%, interjections .1%, conjunctions .05%. (I have obtained these results

through examination of several of the leading dictionaries). (4) In the ordinary running conversation of adult language, the language which the child naturally imitates, the noun and the verb elements are about equal. In view of these facts, the percentage of verbs in the child's vocabulary is fairly normal when compared with adult language.

Verb forms, especially irregular forms, probably give the child most trouble, and linguistic errors here persist long after the child's language is otherwise quite perfect. The prevailing impression that the child naturally experiences great difficulty in learning to use the personal pronouns correctly is generally due to the incorrect use of these words by parents or other associates in speaking to the child. The use of "baby-talk" by parents evidently retards linguistic as well as mental progress and hence this practice can not be too strongly condemned. No pains were taken to teach G to use pronouns correctly and yet she experienced no more difficulty in the use of these than of any other class of words.

Adjectives and adverbs get into the child's vocabulary long before he has any real use for them or any useful appreciation of their meanings. Thus the terms, "sorry," "naughty," "dreadful" and "comfortable" were all used by G when she was two and one half years of age, evidently a purely "physical" or imitative use. An important and commonly disregarded factor in the acquisition of any class of words by the child is the stress of voice or accompanying facial expression with which the words are spoken, since this has much to do with the vividness of the images of such words in the child's mind. Slang phrases are thus readily picked up by children, as they are usually uttered with greater emphasis than other phrases. Prepositions and conjunctions, according to this principle, are comparatively late in getting into the child's vocabulary.

One Day's Language Expression. While this vocabulary alone may serve in some measure as a key to the linguistic progress and the mental make-up of the child, I believe that a more complete and accurate estimate of the language ability may be gained if this be supplemented by at least enough of the child's daily speech to show something of the manner in which he uses this linguistic tool-chest. It is hardly sufficient to record for examination an occasional paragraph as one might easily select portions which would give a totally wrong impression. I have accordingly made an accurate record of G's entire speech during two different days, beginning when she awoke in the morning and ending when she went to sleep at night, the most typical of which was chosen for detailed

study. As far as possible the exact pronunciation and manner of speaking were noted. Sometimes one was obliged to write so rapidly that sufficient attention could not be paid the pronunciation to get it perfectly accurate. I might say in passing that G at thirty-eight months pronounced, or was able to do so when she was not careless, all the words which she knew correctly and distinctly. The last two sounds with which she experienced any difficulty were R and Th and they were mastered early in the thirty-eighth month. Even now in her forty-first month she is occasionally careless in her enunciation ; e. g. she says "somepin" at one time and "something" at another. So far as I can observe, practically every case of grammatical error or of carelessness in pronunciation can be traced to a similar one in the language of some one of her associates. Exceptions to this are some errors in verb inflections which still give her some trouble. The following summary contains what seem to me the more significant data to be secured from this record :

Data from the One Day's Language Expression

Total number of different words used	859
Total number of words uttered (except in singing)	11623
Number of words in repetitions	1823
Number of words uttered exclusive of repetitions	9800
Total number of sentences used	1873
Number of sentences exclusive of repetitions	1487
Number of sentences which were repetitions	386
Cases of repetitions	162
Number of interrogative sentences	345
Number of interrogative sentences repeated	31
Average number of words in repeated sentences	5
Average number of words in other sentences	6.6

Sixty per cent of the interrogative sentences were used during the first half of the day. Eighty-four and three tenths per cent of the cases of repetitions of interrogative sentences occurred during the first half of the day.

If one has any doubts as to the social tendency in children or its importance as a factor in language development, the number of words uttered in a day by a normal child ought to be fairly convincing. G spoke during this day of twelve hours and fifteen minutes approximately nine hundred and fifty words per hour ; she would no doubt have used at least five hundred more during the day, making a total of twelve thousand, had we been able to answer her questions and otherwise talk to her as much as usual. This we could not do as we were

too busy writing (G did not not suspect what we were doing, but thought we were writing letters). Large as the number of words seems, it is probably only a normal number. Gale reports a boy of two and a half years to have used 9,290 with 479 different words and another child of just two years to have used a total of 10,507 with 805 different words (20). Sanford Bell found that his child of four years and nine months uttered 14,996 words while one of three and a half years used 15,230 in a day (4). As Trettien suggests these facts indicate something as to the tremendous expenditure of energy through the vocal apparatus. Now if this tendency to linguistic expression is so strong that there is a spontaneous and continual flow of energy to such an extent through its channels, to say nothing of the amount spent in physical expression, what shall we say of a system of training which enforces a state of inactivity and silence upon children during five or six of the twelve or thirteen waking hours of the day (55) ?

The amount of repetition is somewhat surprising. Evidently a great deal of it comes from our failure to respond promptly to her remarks, for during the time from eight-thirty to nine-fifty when she played with another child there was very little repetition. The child would naturally answer her remarks or questions more readily than we would. Still there seems to be another factor involved. So far as I can ascertain, G has not discovered that what she says in speaking to one person is heard by the others present and consequently she often repeats a remark to each one present. I judge from this that when one does not respond to her remarks, she thinks he has not heard. Or it may be that she has failed so far to notice that other people when talking address the whole company and hence imitatively she does as she thinks she observes others to do. This is supported by the fact that she frequently requests me to tell her something which I have told her mother in her presence, every word of which she has distinctly heard, and she is very much offended if I refuse. Kirkpatrick says, "Children often repeat over and over a statement to make sure it is understood, and cease only when they receive assurance by word or act that they have been understood." Then there is the additional important observation that children delight in talking or babbling or exercising the vocal apparatus in any way as a sort of practice merely for the pleasure it gives them (28). It is quite probable that much of G's repetition is due to this "linguistic play" so prominent in the earlier stages of childhood.

About twenty-three per cent of the sentences used, not in-

cluding repeated sentences, were interrogatory. They are not all, properly speaking, questions, i. e. questions asked by the child for the purpose of finding out something which she does not know, or satisfying any desire unless it be the desire simply to create a response; e. g. "We don't eat dirt, do we?" "Scrape dirt off, don't we?" "Wasn't that a funny trick?" "I ain't swinging too high, am I, Mamma?" As Groos has pointed out, the child loves to cause things and causing other persons to respond to his remarks by putting them in the form of questions is a form of creating for him just as is babbling or "voice-gymnasticizing" in his earlier stages. It will be seen, however, that a fair percentage of the interrogative sentences are real questions asked in a distinctly purposeful way; e. g. "Can I help you write?" "How do we play that, Lyle?" "Don't you want this window down so it won't be cold?" "What do bears say?" "Papa, is it 'before' or 'berfore?'" "When is it Christmas?" We have discouraged her in asking questions otherwise than in an intelligent manner, believing that children are able quite early to appreciate the use and purpose of questions and that they should be encouraged in asking questions only when they have some purpose other than mere talking. It may have been merely accidental that sixty per cent of the interrogative sentences and eighty-four per cent of the repetitions of such sentences occurred in the first half of the day, but it is reasonable to suppose that this indicates greater inquisitiveness and especially greater persistency of this mental characteristic during this part of the day.

That a child uses so many different words in the course of a twelve-hour day is again somewhat surprising to the average person. The number of different words used in one day, eight hundred and fifty-nine, is seen to be thirty-seven and six tenths per cent of her total vocabulary as given in the first part of the discussion. This indicates that the child has not acquired a great many useless terms, but that, generally speaking, as soon as she came into possession of new words she made them a part of her every-day vocabulary.

One of the most significant observations to be made in connection with the record of G's speech for the day is in regard to the period from eight-thirty to nine-fifty when she was playing with another child. This playmate, L, is now past five years of age, comes from an excellent home, has a good vocabulary, uses it well, and is intellectually and linguistically considerably more advanced than the average child of five years. Counting the different words used in this period of one hour and twenty minutes, we find two hundred and forty-seven as

against two hundred and seventy-three in the first hour. On this basis she used one hundred and eighty-six different words in an hour while playing with another child, but under similar environment except that her associates were adults, the preceding hour she found necessary two hundred and seventy-three different words. One might seek an explanation for this in the fact that in the first hour she dressed herself and ate breakfast. But in the afternoon when alone with her parents in the hour from four to five o'clock, she employed two hundred and seventy-four different words. Again from three to four o'clock we find a total of two hundred and twenty-one different words ; while during the period from two to three o'clock, when G was out of doors playing to some extent with two other children as well as talking to her mother, she used two hundred and thirty-one different words.

Examining the length of sentences used while playing with L, the average number of words per sentence is found to be six and two-tenths, counting as one sentence the forty-two-word conversation over the telephone which is really made up of four sentences. Now since the average sentence length for the entire day (exclusive of repetition in both cases) is six and six-tenths words, it is evident that though the difference is slight, G used longer sentences when in the company of adults than she did while playing with the other child. Concerning pronunciation and enunciation no appreciable difference could be noticed. However, as stated early in the discussion, whenever she played with children who did not pronounce and enunciate well her speech has immediately suffered accordingly.

One of the first difficulties the child encounters in learning articulate language is that of pronunciation. Noble has worked out the following law in regard to this matter : " Correct pronunciation depends on close perception and knowledge of the motions necessary to produce sounds. Hence those sounds most easily articulated are labials and dentals ; those most difficult, the gutturals and medials " (38). The most important factors involved in a child's pronunciation are, (1) keenness of auditory perception, (2) ability to adjust the vocal apparatus, (3) sound combinations, and (4) pronunciation by the child's associates. In the very early stages when the child is learning his labials or dentals, visual perception may be a small factor in learning to pronounce; but it has never been completely proven that the child looks at the mouth of one speaking as Noble claims. Lack of accurate perception on the part of the child as well as poor or careless pronunciation by the parents or other associates leads to many

peculiar mistakes. G at twenty-six months after hearing the song, "Leaning on the Everlasting Arms", gave this version of it, "Leanin' on Jes' I lost my arm"; just recently as she was going to bed one evening I sang, "Bring Back my Bonnie to Me," and we were awakened the next morning by her singing, "Bring my body back, bring my body back." At three years of age her pronunciation of "university" was "union-versity." Failure to get the exact auditory image was probably the important factor in each of these errors, but it was certainly not the only one. In the first case "Leaning on Jesus" was remembered because of the number of times it was repeated and because of its position as the initial phrase in the chorus of the song, and "everlasting arms," because of repetition and its position as the final phrase in the chorus; but "everlasting arms" became "I lost my arm" because these words were familiar to her and hence had some content while the former were new and meaningless. The other two cases may be similarly explained, "union-versity" being a confusion of "union-suit" and "university." Such cases as these are no doubt partly due then to "mental habit" and association and confusion of mental images.

Facility in adjustment of vocal apparatus differs widely in different children and lack of this accounts for the backwardness of some children in attempting to talk or for failure to pronounce well when they do try. Many mistakes in pronunciation may be traced to difficult sound combinations; thus G invariably says "plano" for "piano" when talking rapidly and yet she pronounces every sound in the word accurately in other combinations with no difficulty.

But the most prolific source of mispronunciation is to be found in the language of the child's associates. Where the child plays much with other children, this is to be expected; the mistakes of one child soon become the mistakes of all who play with that child. To illustrate, after G had for some time pronounced practically all her words correctly and accurately, she went to play with another child who was just learning to talk; coming home she talked after this fashion, "Dă my bŏ" ("That's my box") and "I wą pē bĕ bŭ" ("I want a piece of bread and butter"). This happened many times and in every instance that she played with this child her pronunciation suffered in this way so that it usually took some two or three days before her language was again normal. Many authorities have referred to the advantages of playing with other children to further a child's linguistic development. "A constant association," says Doran (13), "with other children

of about the same age is an incentive to the little one to talk, and a child so situated will hear more language suited to its capacity than the child brought up in isolation;" and there may be some good ground for the belief that this is an aid in linguistic growth. But, as I have pointed out before, there were unmistakable signs of retardation in G's linguistic development in the thirty-fifth, thirty-sixth, and thirty-seventh months when she played a great deal with other children.

Conclusions

Words do not function grammatically in the early stages of linguistic development; e. g. a word may be a symbol for an object one moment, for an action the next, and for a quality at another time, or it may represent several parts of speech at once.

Acquisition of words of whatever class or kind is chiefly a matter of imitation and hence depends almost wholly upon environment. Hence to interpret fully and fairly the vocabulary of the child, the significance of the language of his parents or associates must not be overlooked.

Provided good English is always spoken in the presence of the child, he will experience greater difficulty in learning to use verb inflections properly than he will in acquiring any other class of words.

Pronouns, like any other class of words are learned largely through imitation and hence their use by the child does not indicate in him an awakening of the consciousness of the existence of distinct personalities. Pronouns are acquired and used with little more difficulty than other classes of words if they are used as much and as properly as other words in the presence of the child.

Contrary to general opinion association with other children is conducive neither to the development of a good vocabulary nor to good linguistic expression.

Inasmuch as the tendency to vocal expression in children is instinctive and gives rise to an almost continuous flow of language, any system of training for young children is defective which does not provide for constant well directed linguistic exercise.

Generally speaking, words so pronounced by the child's associates as to produce the most vivid images in his mind are most readily imitated by him; this explains largely why children pick up slang phrases so quickly.

The use of "baby-talk" by the child's associates is detrimental to his mental as well as linguistic development.

THE VOCABULARY

A, about (adv.), about (prep.), accident, ache, "achoo," across, act, acting, afraid, after (adv.), after (prep.), afternoon, again, against ago, ahead, ails, ain't, air, airship, album, all (adv.), all (n.), all right, almost, alone, along, already, always, am, Amy, an, and, animal, animal-cracker, another, answer, answered, anybody, anyhow, anyone, anything, anyway, anywhere, apiece, apple, apple-sauce, apron, Arapahoe, are, aren't, arm, around (adv.), around (prep.), arrow, Arthur, as (conj.), as (adv.), ashamed, ashes, ashpit, ask, asked, asking, asleep, at, ate, aunt, auto, automobile, awake, away, awful, awfully, ax.

"Baa," baby (n.), baby (adj.), back (n.), back (v.), back (adv.), bacon, bad (a.), bad (adv.), bag, bake, baked, baked-beans, bakerman, baking, balky, ball, banana, band, bang (n.), bang (v.), bank, bare, barefoot, barn, barrel, Bartato, basin, basket, bath, bathrobe, bathroom, bathtowel, bathtub, batter, bawl, be, beads, "bean," beanbag, beans, bear, beat, beater, beautiful, beauty, Beauty, because, bed, bedroom, bedtime, bee, beef, beefsteak, been, beer, beerbottle, before, began, begin, beginning, begun, behave, behind (adv.), behind (prep.), believe, bell, belly, belong, belt, bend, bent, berry, besides, Bessie, best, bet, better, between, bib, Bible, bicycle, big, bigger, biggest, Bill, "bing," bird, birthday, biscuit, bit (n.), bit (v.), bite (n.), bite (v.), biting, black (v.), black (a.), blanket, bleeding, bleeds, blinds, blister, blocks, blood, bloomers, blotter, blow, blowing, blue, blueing (n.), blueing (v.), board, boat, body, boil, boiler, boiling, bone, bonnet, book, bookcase, boost, boots, borrow, borrowed, both (pron.), both (a.), bother, bothered, bothering, bottle, bottom, bought, Boulder, bouquet, bow, bowl, "bow-wow," box, boy, Boy Blue, bracelet, branch, Brandenburg, bread, bread-basket, bread-board, bread-can, break, breakfast, breakfast food, breaking, breast, brick, bridge, Brighton, bring, bringing, broke, broken, broom, brother, brought, brown, brown-bread, brush (n.), brush (v.), brushed, brushing, bubble, bucket, buckle, bud, bug, "bugger," buggy, build, building (n.), building (v.), built, bulldog, "bum," bump (n.), bump (v.), bumped, bunch, bureau, burn (n.), burn (v.), burning, burnt, burro, bush, bushel, "bust," busy, but, butcher, butcher-knife, butter butterfly, button (n.), button (v.), buttoned, buttonhole, buy, buzz, buzzing, by, by-and-bye, bye-bye.

Cabbage, cage, cake, calf, call, called, calling, came, Camera, Campbell, can (n.), can (v.), candle, candy, cane, can't, cap, car, cards, care (n.), care (v.), careful, Carl, carpet, carried, carrot, carry, carrying, cat, catalogue, catch, catching, caterpillar, caught, ceiling, celery, cellar, cents, certainly, chain, chair, "chair," chamber, change (n.), change (v.), Charles, Charlotte, chase, chased, cheek, cheese, chew, chewed, chewing, chicken, chicken-feed, chicken-house, child, children, chimney, chin, chip, chocolate, choke, "choo-choo," chop, chopping, Christmas, Christmas-tree, church, cigar, cinnamon, circus, city, clap, clean (a.), clean (v.), cleaning, clear, climb, climbing, clock, closet, cloth, clothes, clothes-bag, clothes-basket, clothes-brush, clothes-line, clothes-pin, clothes-stick, clouds, cloudy, "cluck," coal, coal-bucket, coal-shovel, coarse, coat, coax, "cockadoodle-doo," cocoa, cocoanut, coffee, coffee-pot, cold (n.), cold (a.), cold-cream, collar, color, comb (n.), comb (v.), combed, combing, come, comfortable, coming, company, cook, cook-book, cooked, cookies, cooking, cool, Cora, cord, core, cork, corn, corn-bread, corner, corn-flakes, cornmeal, corset, cost, cotton, couch, cough (n.), cough (v.), could, couldn't, count, couple, cover (n.), cover (v.), covered, cow, crack, cracked, crackers, cracking, cradle, cranberries, crank (n.), crank (v.), cranky, crawl, crazy, cream, cream-pitcher, creek, creep, creeping, crib, cribbage, cribbage-board, cried,

crochet, crochet-hook, cross, crumbs, crust, cry, crying, cuddle, cuff, cuff-button, cunning, cunningest, cup, cupboard, cupful, curl (n.), curl (v.), curling, curtain, cushion, custard, cut, cute, cutting.

Daddy, dance, danced, dancing, dandelion, dandy, Daniels, dare, dark, darling, darn, darning, daughter, day, daylight, daytime, dead, deal (n.), deal (v.), dear (n.), dear (a.), dearie, death, deep, deeper, deepest, Denver, Denver Post, depot, devil, diamond, dictionary, did, didn't, die, different, dig, digging, ding-dong, "dingy," dining-car, dining-room, dinner, dipper, dirt, dirty, dish, dish-cloth, dish-pan, dish-towel, ditch, dizzy, do, doctor, does, doesn't, dog, doggie, doing, doll, dollar, doll-buggy, dollie, done, donkey, don't, door, door-knob, Dorothy, double, dough, down, downhill, downstairs, Doyle, dozen, drawer, drawers, dreadful, dream, dress (n.), dress (v.), dressed, dresser, dressing, drink (n.), drink (v.), drinking, drip, drive, driver, driving, drop (n.), drop (v.), dropped, dropping, drove, drum, drum-stick, dry (a.), dry (v.), Duard, duck, dug, "Dumfo," dust (n.), dust (v.), dust-cloth, dust-pan, dusty, Dutch.

Each (pron.), each (a.), ear, early, easy, eat, eating, egg, egg-beater, eight, either, elbow, electric, electric-light, eleven, else (pron.), else (adv.), empty (a), empty (v.), end, engine, enough (n.), enough (a.), envelope, errand, Ethel, ever, every, everybody, everything, everywhere, excuse, expect, eye, eye-winker.

Face, fall, falling, far, farther, fast, fasten, faster, fat, father, faucet, feather, feather-bed, fed, feed, feeding, feel (trans.), feel (intrans.), feeling, feet, fell, fellow, fence, Fergus, Ferguson, few, fiddle, fifteen, fifty, fig, fight, fill, filling, find, fine, finger, finger-nail, finish, finished, fire, first, fish (n.), fish (v.), fishing, five, fix (n.), fix (v.), fixed, fixing, flag, flat-iron, floor, flour, flower, Floyd, fly (n.), fly (v.), fold, folding, folks, follow, fooling, foolish, foot, football, footstool, for, forehead, forenoon, forget, forgot, forgotten, fork, forty, found, four, Frank, fresh, freeze, freezing, Friday, fried, fringe, frog, front, front-door, frosting, froze, frozen, fry, frying, frying-pan, full, fun, funny, fur, fuss, fussing, fuzzy.

Game, garden, garter, gasoline, gate, gave, Gaylord, gelatine, George, get, getting, "get-up," girl, give, glad, Gladys, glass, glasses, Glen, gloves, glue, go, "gobble," God, going, Goldilocks, gone, good, good-bye, good-morning, good-night, goose, got, grab, gracious, graham, grandfather, Grandma, grandmother, Grandpa, grapes, grass, gravy, grease (n.), grease (v.), greasy, great, green, Gregg, groceries, grocery-man, grocery-store, ground, grow, guess, gum, gun.

Ha ha, had, hadn't, hair, hair-brush, hairpin, half, hammer, hammock, hand (n.), hand (v.), handkerchief, handle, hang, hanging, happy, hard, hardly, has, hasn't, hat, hatpin, Hattie, have, haven't, having, hay, he, head, headache, hear, heard, heaven, heavy, heel, Helen, hello, help, helped, helping, hen, here, hers, herself, hey, hid, hide, hiding, high, highchair, hill, him, himself, his, hitch-up, hitting, hoe, hold, holding, hole, holler, home, honey, honest, hood, hook, horse, horseback, horsie, hose, hot, hotwater-bottle, house, how, hug (n.), hug (v.), hugging, hundred, hung, hungry, hunt, hunting, hurried, hurry, hurrying, hurt, hurting, hush.

I, ice, icecream, icy, if, in (adv.), in (prep.), indeed, Indian, ink, inky, inside, instead, into, Iowa, iron (n.), iron (v.), ironing (n.), ironing (v.), ironing-board, is, isn't, it, its, itself.

Jack, jacket, jack o'lantern, jail, jam, jar, jelly, jerk, jerking, jingle, Joe, joke, joking, jug, juice, juicy, Julia, jump, jumped, jumping, just.

Keep, keeping, kettle, key, keyhole, kick, kicked, kicking, kids, kill, killed, kind (n.), kind (a.), kiss (n.), kiss (v.), kissed, kissing,

kitchen, kitten, kitty, kitty-hood, knee, knife, knock (n.), knock (v.), knocked, knocking, knot, know, knowed, knowing.

Lace (n.), lace (v.), laced, lacing, lady, laid, lamb, lamp, lap, lard, last, laugh, Laura, lay, lazy, leaf, lean, leaning, learn, leave, leaves, left, leg, leggings, lemon, lemonade, let, let's, letting, letter, lettuce, library, lick, licked, licking, lid, lie, lift, light (n.), light (v.), light (a.), like (adv.), like (v.), limber, line, lion, lip, listen, listening, little, load, loaf, lock, locked, locket, locking, London, lonesome, long, longer, longest, look, looked, looking, looking-glass, loose, lose, lost, lot, loud, lounge, love, loving, low, Lucile, lunch, Lyle.

Machine, mad, made, magazine, mail (n.), mail (v.), mail-box, mail-carrier, mail-man, make, making, Mamma, man, manage, many, maple-sugar, marble, mar (n.), mark (v.), marked, mash, Master, match, match-box, matter, Maud, may, maybe, McGinty, me, meal, mean (a.), mean (v.), meant, meat, meat-market, medicine, Meekin, meet, melt, melting, mend, mending, "meow," merry-go-round, mess, Methodist, middle, might (n.), might (v.), Mike, Mildred, milk, milk-bottle, milk-man, milk-ticket, mince-pie, mind, mine, minute, Miss, mistake, mistaken, mitten, mix, mixed, mixing, molasses, Monday, money, monkey, "moo," moon, mop (n.), mop (v.), mopping, more, morning, most, Mother, motor-car, mouse, mouse-trap, mouth, mouthful, move, moved, moving, M., Mrs., much, mud, muddy, muffin, mule, mush, music, muss, must, mustn't, my, myself.

"Na," nail, nap, nasty, naughty, near, nearly, neck, neck-tie, need, needle, needn't, neither, nest, never, new, newspaper, nice, Nig, night, night-dress, night-gown, "nightie," nine, no, noise, noisy, No M'am, none, noon, nor, nose, No Sir, not, note, nothing, now, nuisance, number, nut, nut-cracker, nut-pick.

Oatmeal, o'clock, of, off, often, Oh, old, Olive, on (adv.), on (prep.), once, one (n.), one (a.), onion, only, open (a.), open (v.), opened, opening, or, orange, orange-juice, organ, other, "ouch," ought, oughtn't, our, ours, ourselves, out, outdoors, oven, over (adv.), over (prep.), overcoat, own, "ow," oysters.

Page, paid, pail, pain, paint, painting, paint-brush, pair, pan, pancake, panties, pantry, pants, Papa, paper (n.), paper (v.), paper-boy, paper-doll, papered, paragraph, parasol, pare, paring, parlor, part, party, pass, past, pasture, pat, path, patted, pattern, patting, pay, peach, peanut, pear, peas, peek, peek-a-boo, peeking, peel, peeling (n.), peeling (v.), peep-peep, pen, pencil, penny, people, pepper, peppermint, perform, performance, pet, petticoat, petting, phenolax, physic, piano, pick, picked, picking, pickle, picnic, picture, picture-book, pie, piece, pie-crust, pig, pile (n.), pile (v.), pillow, pillow-case, pin (n.), pin (v.), pinning, pinch, pinched, pinching, pin-cushion, pipe, pitcher, place, plain, plate, play, played, play-house, playing, plaything, please, plenty, plum, pocket, pocket-book, poke, poker, policeman, pony, poor, porch, pork-chops, post, postal-card, post-office, pot, potato, potato-masher, pound (n.), pound (v.), pounding, pour, poured, pouring, powder, preach, preacher, preaching, pretty (a.), pretty (adv.), Prince, prunes, pshaw, pudding, puff, pull, pulling, pumpkin, punch, puppy, purse, push (n.), push (v.), pushed, pushing, pussy-cat, put, putting.

"Quack," quarrel, quarreling, queen, quick, quiet, quilt, quit, quite.

Rabbit, rag, ragged, railroad, rain (n.), rain (v.), raining, raisin, rake (n.), rake (v.), raking, Ralph, ran, rascal, rather, rattle (n.), rattle (v.), razor, reach, reached, reaching, read, read (past), reading, ready, real, really, red, remember, reservoir, rest (n.), rest (v.), rested, resting, ribbon, rice, ride (n.), ride (v.), riding, right (a.), right (adv.), ring (n.), ring (v.), ringing, river, road, roast, roast-beef, roasting, rock (n.), rock (v.), rock-a-bye, rocking, rocking-chair,

roll, rolled, rolling, rolling-pin, Roman Meal, rompers, roof, room (n.), room (v.), rooster, rope, rose, rotten, rough, round, row, rub, rubbed, rubber, rubbers, rubbing, rug, run, running, rush.

Sack, saddle, safety-pin, said, sail, sailing, saleratus, salmon, salt, salt-cellar, salty, same, sand, sandy, Santa Claus, sat, Saturday, sauce, saucer, sauer-kraut, sausage, saw (n.), saw (intrans.), saw (trans.), sawing, saying, scalawag, scamp, scatter, scare, scared, scarf, school, school-house, scissors, scold, scolding, scorch, scorched, scrap, scrap-book, scratch (n.), scratch (v.), scratched, scratching, scream, screaming, screen, screen-door, screw (n.), screw (v.), screw-driver, scrub, scrub-brush, scrumptious, seat, secretary, see, seed, seem, seen, sell, send, sent, sermon, seven, sew, sewed, sewing, sewing-machine, shady, shake, shall, shame, sharp, sharpen, shave, shaved, shaving, shaving-brush, shawl, she, shears, sheep, sheet, shelf, shell (n.), shell (v.), shelves, shine, shining, shiny, shirt, shoe, short, shorter, should, shouldn't, shovel (n.), shovel (v.), shoveling, show, showed, "shucks," shuffle, shut (a.), shut (v.), shutting, sick, side, sidewalk, sift, sifter, silk, silly, silver, since, sing, single, singing, sink, sir, Sissy, sister, sit, sitting, six, "skiddoo," skin, skinny, skip, skipped, skirt, sky, slam, slamming, slap, slapped, slapping, sleep (n.), sleep (v.), sleeper, sleeping, sleepy, sleeve, slept, slice, slide, sliding, slip, slipped, slipper, slippery, slipping, sliver, slow, smart, smell (n.), smell (v.), smelled, smelling, smile, smiling, smoke (n.), smoke (v.), smoked, smoking, smooth, snarls, sneeze (n.), sneeze (v.), sneezed, sneezing, snore, snored, snoring, snow (n.), snow (v.), snow-ball, snow-bank, snowed, snowing, snow-man, snowy, so (adv.), so (conj.), soak, soaked, soaking, soap, soap-dish, soapy, socks, soda, soda water, soft, soiled, sold, some, somebody, somersault, something, sometimes, someway, somewhere, song, song-book, soon, sore (n.), sore (a.), sorry, sound, soup, sour, spank, spanked, spanking (n.), spanking (v.), speak, spider, spill, spilling, spilt, spit, spitting, splash, splashing, splatter (n.), splatter (v.), spoil, spoiled, spool, spoon, spoonful, spot, spread (n.), spread (v.), spring, sprinkle, squash, squall, squeal, squealing, squeak, squeeze (n.), squeeze (v.), squeezing, staid, stairs, stamp, stand, standing, star, start, starved, station, stay, staying, steal, steam, stem, step (n.), step (v.), stepped, stepping, stick (n.), stick (v.), sticker, stick-pin, sticky, still (a.), still (adv.), stir, stirred, stirring, stocking, stocking-cap, stomach, stone, stood, stoop, stop, stopped, stopping, store, storeroom, storm, stormy, story, story-book, stove, stove-pipe, straight, strainer, strap, strawberry, street, street-car, string, strip, strong, stuck, study, studying, stuff, such, suck, sucked, sucking, sugar, "sugar," sugar-bowl, sugar-can, suit, suit-case, summer, sun, Sunday, Sunday School, sunny, sunshine, sunshiny, supper, supporters, suppose, supposing, sure, surprise, suspenders, swallow, swallowed, sweater, sweep, sweeping, sweet, sweetheart, swell, swept, swing (n.), swing (v.), swing-board, swing-rope, swinging, syrup.

Table, table-cloth, tail, take, taken, taking, talk, talking, tangle, tangled, tapioca, tassel, taste (n.), taste (v.), tea, tea-ball, teach, tea-kettle, tea-party, tea-pot, tear, "teared," tears, tease, teased, teasing, teaspoon, Teddy-bear, "teensy-weensy," Teeny, teeter-totter, teeth, telephone (n.), telephone (v.), tell, telling, ten, tennis, tennis-racket, than, thank, Thanksgiving, that (pron.), that (a.), the, them, then, there, these (pron.), these (a.), they, thick, thimble, thin, things, think, thinking, thirsty, thirteen, thirty, this (pron.), this (a.), Thompson, those, though, thought, thread (n.), thread (v.), three, throat, through (adv.), through (prep.), throw, throwing, throw up, thumb, Thursday, ticket, tickle, tickling, tick-tock, tie (n.), tie (v.), tied, tieing, tight, tights, till, time, tincup, tiny, tip, tipping, Tipps, tired,

to, toast (n.), toast (v.), toaster, toasting, today, toe, toe-nail, together, toilet, told, tomatoes, tomorrow, tongue, tonight, too, took, tooth, tooth-brush, tooth-pick, "too too car," top, torn, touch, touching, tough, towel, town, toy, track, train, treat, tree, trick, trouble, trunk, truly, tub, Tuesday, tumble (n.), tumble (v.), tumbled, tumbler, turkey, "Turkey-day," turn, turned, turning, "tweet," twelve, twenty, twist, twisting, two, typewriter.

Umbrella, unbutton, uncle, Uncle Sam, uncover, under, underclothes, underskirt, understand, underwear, undo, undress, unionsuit, University, unlock, unpin, untangle, untie, unwind, up, uphill, upstairs, us, use, "usen't," using.

Vaccinate, varnish (n.), varnish (v.), varnishing, vase, vaseline, veil, velvet, verse, very, vest, vine, vinegar, visit, visiting.

Wagon, waist, wait, waited, waiting, wake, "waked up," waking, walk (n.), walk (v.), walked, walking, wall, want, wanted, warm, warmer, was, wash, wash-basin, wash-board, washed, washing (n.), washing (v.), wash-rag, wasn't, watch (n.), watch (v.), watching, water, wave, waved, waving, way, we, wear, wearing, Wednesday, "wee wee," weeds, week, weigh, welcome, well (a.), well (inter.), went, wet (a.), wet (v.), what, wheel (n.), wheel (v.), wheeling, when, where, which, while, whip (n.), whip (v.), whipping (n.), whipping (v.), whiskers, whisper, whistle, whistling, white, who, whoa, whole, whooping cough, why, wide, will, wind (n.), wind (v.), window, windy, wine, wings, winter, wipe, wiped, wiping, wire, wish, wishing, with, without, wolf, woman, wonder, won't, wood, woolly, wood-pile, woods, word, work (n.), work (v.), worked, working, worm, worn, worst, would, wouldn't, "wow," wrap, wreck, wring, wringing, wrist, write, writing, wrong, wrote.

Yard, years, yeast, yell, yellow, yes, yes M'am, yesterday, yet, you, your, yours, yourself.

Zinc.

THE SUB-CONSCIOUS VOCABULARY

Appetite, April-Fool, asparagus, Aunt Alta.

Banister, Bertha, Betty, blackberries, blackboard, blade, Bob-white, bonfire, brake, Brickner, bun, "buggy," "bully."

Calendar, camphor, cantaloupe, Cappie, carnation, Caroline, castor-oil, cement-walk, checkers, cherries, Clint, concert, court-house, cousin, cricket, cucumber, currants.

Davenport, delicious, Donald, Dutchman, drug-store.

Edgar, elastic, Estes Park, Esther, Etta, Eva.

Fan, fire-cracker, fish-line, fish-pole, flat, fountain, fox, "foxy," fractious.

Gasoline-can, gasoline-stove, Geneva, "git-out," Golda, grape-juice, grunt (n.), grunt (v.).

Hail, harness, Harold, Harriet, hatchet, hay-mow, Hazel, Henry, hiccough, Hines, "hobo," horrid, horse-radish, Howard, howl, hurrah.

Inez, interesting, Irwin.

Jones.

Kastor.

Ladder, lawn, lawn-mower, left (adv.), Leland, Leta, Linda, lines (reins), lunch.

Manny, maple-syrup, marmalade, McNutt, meadow-lark, Minnie, Miss Lamb, mountain, mosquito, mow (v.), mud-puddle, mustard.

Nibble (n.), nibble (v.), nostril.

Oil-can, oil-cloth, olive-oil, olives, opera-house.

Pansies, paste, paste-board, phonograph, piano-stool, pineapple, plant

(v.), planted, planting, popcorn, pump (n.), pump (v.), pumped, pumping, punish, purr, purring, practice, practicing, putty.

Question.

Raspberries, restaurant, Robinette, Rubie.

Salad, salts, scythe, sherbet, shoe-string, shoot, shoot-gun, sieve, skates, skip (v.), Skip, smoky, snake, snap (n.), spade, spectacles, squirrel, steady, stomach-ache, stretch, stumble, stumbled, sweet-peas, switch (n.), syringe.

Tank, Taylor, tennis-ball, tennis-court, terrible, thunder, tin-can, toad, tomato-soup, trot, trotting, trout, turnips, turpentine.

Upset (n.), upset (v.).

Wade, water-melon, wheelbarrow, whetstone.

"Zabo."

THE CONVERSATION OF G FOR ONE ENTIRE DAY

7:05 A. M. (Talking to her father.) Six o'clock isn't it(2)* Can't I dress? (2) Ain't it warm? Believe it's going to be another windy day. Are you all dressed? Got your shoes and stockings all on? Papa, I'm awful hungry. I slept pretty good. I want somebody to dress me. Can I help you write? Oh land, you'll wake Mamma up. (To her aunt.) Oh, Aunt Laura, did Uncle Ralph run away? Where did he go? (To her father again.) Papa, I wonder if my blister's going to stay or not. Where's my other clothes? (1) There's one o'my stockings. There's a prayer-book, prayer-book.(4) Did you fix my shoe? Ain't it got anything bad in it any more? Here's something. It's big paper. Yes. This'n isn't unbuttoned. Here, I am going to stand on this. There's all my clothes. Which way does it go? (2) Here's a penny in my union-suit. (Hums.) This little nuisance goes into my sleeve.(2) Oh, Papa, this other way gets mixed up. You don't have to button this.(1) I bet I can tie this.(1) Here's your pin. Here, I need that in my waist. You unpin it. This has to be out some so I can tie it. Now they're all out so I can tie. I'll get this on. Which way does this go on? No, where's this one? Now, where's the other one? Nobody can see on this side, can they? Button it. Oh, show me how this goes.(1) Oh, I know. Did you ever? Oh, Papa, I don't know how this goes.(1) I can't get this on 'cause it goes up to my neck. I don't think this is too tight. Where's my bloomers? Oh, I'm going to put my bloomers on.(3) Papa, I can't get my bloomers on. Papa, you straighten 'em out. See, I can get it in the right one. Now, see, can't get it in the right one again. Which way? Which way, then? Papa, that sore on my heel hurts when I walk on my bare foot. Oh, ha, I pretty near fell down. I can get my garters in myself. See? Now where's this other one that belongs to this one?(1) I don't either. I guess we'll have to. Is it time to get up? Mamma won't get up when it's time to get up. Mamma, you get up. All right. Oh, my bump hurts.(2) Can you do any trick like this? I am going to get my shoes first. Yes. Papa left this piece of garter outside the room. Why do you stay in bed so long, Mamma? Can you do that? (1) Yes, you can. You can too, Mamma.(2) Papa, that wakes poor Aunt Laura up. You don't want to wake her up, do you? He did that, that way. I see something (1) on your nose. Papa, did you button this one up when you fixed it? Who buttoned this up? Did you fix this one? I got to.(3) I got to dress. Where's my dress? I can't find my dress when the covers are all over it. Dear Evelina

* The numbers in parentheses following sentences indicate number of times sentence was repeated.

— — (sings). Mamma, can you sing "Dear Evelina"? Aunt Laura can sing it. Dear Evelina (singing), wherever she goes, I won't spank her.(2) Mamma, bet ten cents I'll beat you. Mamma, I want to go with you. Papa, I'll bet you we'll have to go and feed the old hen.(1) See this seam? It goes clear up to my neck. Don't see my dress. Oh, it goes on the arm, see? My dress is wrongside out. Have to get the sleeves rightside out. (Goes to the bathroom to wash.) Oh, this water is so cold.(1) Mamma, I'm so dirty I have to wash. Mamma's got a dirty egg. (Goes to the kitchen, gets a book, reads incoherently, saying about fifty words.) Papa, isn't that a nice story? (Reads again.) I don't know any more stories in this book. I don't. I don't either. Mamma, I don't know any more stories in this book. It's too late for the Camera to come now. Mamma, Papa said you'd fix my belt button. Mamma won't fix my belt (button) when she's washing dirty eggs. Uncle Ralph left his keys. 'Tisn't any fun to leave keys, is it? I'll fix my belt this way if you don't fix it. Mamma, can I go with you? (1) Mamma, Papa's washing his face in that old, dirty water. Now I'm going down where you are.(1) Papa, I've been down where Mamma was. Used to be another button, but there isn't — it's off. It's lost. Mamma, you button my belt in the right place; in the back where it ought to be buttoned. This room is light enough, Mamma.(1) Here I am. Aunt Laura said I could have this. I'm hungry. Then I want an orange.(3) I'll go in and get one. Oh, I want to "chair." Mamma. I want to "chair." My orange isn't on the floor now. is it? Patty-cake. Patty-cake — —. This button right here isn't buttoned. Papa, we don't put pencils in our mouths. Mamma don't put pencils in her mouth. Do you, Mamma? You peel my orange. You, then. These are such good oranges, aren't they, Mamma? Uh, huh, these little ones. Thank you. Aunt Laura gets it mixed up ('Thank you' and 'You're welcome'). Oh, who done that? (2) Did you, Mamma? I mean who broke this piece of orange? Papa, do you want a little piece while you're working? Mamma, do you want some? Mamma, one day a boy came and says, "You want a Post"? and then I says, "No, we got a Post." When we move the piano into the other room, — — I mean in there — not in that room and the secce — secce —. Which way do we say it? Secretary. And then when Uncle Arthur came and they all moved it out. And then one day my box was here and the dishes were there and Lyle was here and we had some little dishes. Mamma, bet ten cents I beat you. My, I wonder if you'll spill the grease on the floor again. Will you? (Sings.) Mamma, I've got to have this on.

8:00 A. M. (Helping to set the table.) These are mine. Papa can't have these. These are mine, Mamma. Don't you know where to put my things?(4) Oh, sugar, don't you know where to put my plate, then? Now looky where you put it. I'll take it over to the table. shall I?(1) Mamma, you left that oven dirty. Do you want it dirty? (2) This old bloomin'(3) doesn't go off. Mamma, hang this up. Papa, Mamma said we could begin to eat now. (Sings.) Don't want my feet in my muddy shoes, do I? Mamma, you fix me something. There isn't any here. I want some milk.(3) Please, may I? Isn't very much milk. I'm eating dinner without my bib on.(1) Don't want that big pancake to eat or I'll get my mouth all full. Now it's all right. What's that right there? It's syrup, isn't it? Some the milk went up to my forehead.(1) I don't want any more dinner — I don't want any more dinner. (Sees her playmate, Lyle, coming.) I'll get my playthings. Mamma, I'll get my playthings and then I'll have them ready when Lyle comes. I got three valentines, Lyle. Did you? Lyle, you and I haven't played together for a

long time. Lyle we haven't got any good apples. You used to have some bananas. Yes. Lyle says he's got a little desk telephone over to his house. Lyle, I'll put your things in on the bed. Mamma, I can't find all my playthings. You find them.(2) Mamma, I see a hole in your dress.(1) (Gets nails and hammers.) Lyle, I'll pound first. We'll each pound with this one, won't we? Haven't you got another box? Lyle, you and me'll fix this old box, won't we? Mamma, you said I could pound into the edges. Is this the edges? Gummeshums, gummeshums! You say that, Lyle. Is this the edge? Here are some nails for you. You and I have a tack, haven't we, Lyle? Papa — Lyle, you have only one tack and I have two tacks. Where? This isn't a tack. It's a nail. We both got tacks, haven't we? Lyle and I have tacks. Did you know I fixed my little hammer? That's a funny way to fix a hammer. Have you got it now? It's lost, isn't it? Is this the edge? Lyle, I bet ten cents I beat you getting my nail in. Looky at my nail. See what I did. Mamma, here's one o' your hairpins. I am going to pound hard.(1) I ain't going to pound hard. I am going to pound slow. Some time I pounded in the edge, didn't I? Here's a tack. It's a tack then. Is it a nail? Lyle, don't, 'cause my box will go over if you don't pound low. Mine will be in pretty soon. Lyle, don't pound till I get this started. People don't pound till little girls get started, do they? All right. Lyle, here are your nails, aren't they? Here's my nails. This one is crooked. This one is straight. Papa gave this little box to me. It's mine. Is this the edge, then? Wow ! Is this the edge? Lyle, don't pound yet. Bow wow ! Here it is. Here it is. Looky what I can do. Lyle gave me all kinds o' nails. Lyle you can have them. Don't you want any more nails? Don't you want to pound any more? That isn't the edge. I can get these in. See what I can do. Dobawshucks ! Where did my nail go? See what I can do. I got one nail out. Lyle, you just watch me get this nail out. He gave it to me. I played peaches in that box one day. I played animals was peaches, and then I went bump. Lyle, you tell me a story. What? Jerry-ann? Jimmy — — Jerry. You look under here and see the nails. We have Fairy soap in the bathroom. You come see. See? Looky what I can do. I'll get Lyle my doll buggy. Lyle, play I was the mamma to get dinner and you was the papa to perform. That will be nice. I'll get my company something. I got lots o' valentines. Who sent 'em to you? Did doggie give 'em to you? I got lots o' playthings. Here's my little chain — that's broken. Mamma, I want to " chair." Lyle, excuse me. I said, " Lyle, excuse me." Mamma, don't let Lyle have them till I get through. I ain't through yet. Can you do this way? Lyle, see what I can do. What can it (the Teddy-bear) do then? I have to pound nails all the time, don't I? Lyle made the bear up on a tree. Can you do that? I want one o' those straps. What did you say? That will hurt poor Boy Blue when you put this strap in it. It will Dollie too. I am going to pull this strap just as tight as I can. That will hurt poor Dollie. But Dollie has got a buckle on both her ends. Oh, you nuisance. Mamma, you haven't mended Teddy for a long, long while. Can you do that, Lyle? Here's the edge, Lyle. You put your finger away, else I'll pound on it. Then I'll pound here. I got this crooked nail. Let's drive Bessie. Lyle and I are going to play horsie. Lyle, what are you doing? I'm going to have mine ready. Get-up, Bessie. Now, you big, bad Bessie. You do that to your Bessie. I'm going to hurt Bessie. Lyle, this box is all broke. See, I had to take the other edge off. How do we play that, Lyle? I want some dollies. All right. This is my box. I am going to play Christmas presents and Santa Claus. I'll be away, Lyle, and then I'll send you some Christmas

presents. Last Christmas a real Santa Claus gave me my real doll buggy. Your automobile? What did he give you? That's a lot for a little Lyle. Lyle, you watch my buggy, will you?

9:00 A. M. (Plays telephone with Lyle.) Hello. Fine. How are you? I had some dollies once, but I haven't now. But I have some nails at our house — — and we had some bananas — — but they're all used up — — and apples, but the apples are all gone 'cause we made dirty, old apple pie. Hello. Well, that's all, but what's your number? Was it changed? Good-bye.

(Still with Lyle.) Lyle, come in and see my Aunt Laura. There's her comb and there's her brush. She is tired; she wants to sleep. Come on out here. I don't want you to rock on that chair. I want a pencil and paper. I made a dog. That's a rabbit. It's a man. This isn't going to be a dog. It's going to be a man. Isn't it? There's his mouth and there are his eyes. That's a man. See what I made. Lyle, you write on your own piece. I'll write some here myself. What's your number? Now see what you did. What is it? All right. Yes, it is a sign. I am going to have a sign. Looky what I did then. That is going to be a sign, isn't it? I'll write on your paper. Looky what I did. Lyle's going home. That isn't a sign. I know how to make rabbits, don't I? Good-bye, Lyle. Iam glad Lyle has been over here. I want to go out and feed my little baby chickens, Mamma. I want to feed them again. I'll break it. I'll wipe it and see if I did. Are you going to let the hen out? Take hold my hand. I am starved to death. I want an orange. I am hungry. I don't like bread without butter. We don't have bread after we've had orange, Mamma. I can find a big piece o' bread. I want something on this piece o' bread when it's good.(1) I want crackers and bread and milk. Who's been drinking it? I want to pound nails. I am going to pound nails to-day. Where's my pencil? I want some paper, too. (She was still for several minutes at a time here as she played.) Let's go to Mrs. Ferguson's so Aunt Laura can sleep. The other Mrs. Ferguson has cookies. Don't you want this window down so it won't be cold? (1) What are you going to do, Mamma? Let's go over to Mrs. Ferguson's, Mamma.(2)

10:00 A. M. (Talking to her aunt and her mother.) Oh, they're (the chickens) just fine. No, there ain't any dead. Ah, I haven't been crying. I ate cracker and milk and bread. That's what's the matter with my face. Let's go to Mrs. Ferguson. You said you was bound to go to Mrs. Ferguson's. All right. I want to sit in this box. Oh, Aunt Laura, Mamma said to be still. Ah, I want to sit right in this box. (2) I am going to put it on the wrong foot, I am. Who was that? I want to sit up there. I won't put my other shoe on for two years.(1) There I went. What did I do? Oh, it's hot. You put some water in my eyes.(2) I want this water. Did your incubator come? When did it come? Now somebody has come. (To her father just coming in.) Looky what I done, Papa, is this mine? Papa brought me something, Aunt Laura. I'll show you now what I got. Mamma, I'm going to put my shoes on. (Hums.) Mamma, pretty soon I'll be down there to help you. Mamma, how does this — —? Now I want my other (shoe). Oh, here it is. Mamma let me up on your lap. Mamma, you're going. There isn't another towel out so I'm not going to wipe the cup. I'm going to let Mamma wipe 'em. Oh, my old, dirty, old nose.(1). Keeps running all the time, doesn't it? (3) I don't like you old rocking chair.(1) Now see what you went and done, you old rocking chair. Papa, I'll show you how Lyle and me played Bessie.(1) Now go in there. Get-up, Bessie. That way, Papa, Lyle and me played Bessie.

Look. (At the telephone.) Mamma, you must be Uncle Arthur. Hello, Uncle Arthur. That isn't the way. Hello. That isn't the way. I ain't going to talk to you.(3) I ain't going to talk to you any day.(3) 'Cause you don't talk right. I ain't going to telephone to you any day, 'cause you don't talk right. That ain't the way to talk, is it, Papa? I ain't going to play with you any day. All right. Where is the milkman? Mamma, here it is. I'll put it (milk bottle) out. Mamma, I want to wait out here till he comes. I didn't want you to shut me up 'cause I wasn't in. Mamma, I want to talk to you. (Telephones.) Hello. How are you? I got nine little chickens. Isn't that nice? Yes. Mamma, is taking a nap, but I'm going to school to teach a class. Where are you? Aren't you in Webster City? How's Grandpa and Grandma? Uh, huh. Yes. All right. I have — I have (2) — —. Uh, huh. Good-bye. (To her father.) Mamma was going to write me down some words. You don't let Mamma write me down some words. Mamma wants to, don't you, Mamma? (1) Now see what you went and done.(2) It's good — — it's good anyway and we don't put good paper in the coal bucket. Do we? (2) We don't have to pick them up and put them in the coal bucket, do we, 'cause they're good? (Hums.) (Goes into bedroom.) Mamma, come on then. Come on then, Mamma. Mamma do you want the light on while we're in here? (2) Mamma, do you want the light on? Mamma, I was going to help you. I wanted to help you get my bed in all at once. I'll put this (a pin) in my dress. Now — — uh,huh. I can't unpin it. I want to roll on your bed.(1) I'll jump.(1) Mamma, don't make this bed. Mamma, I want to help make that bed first. That was too big a ball. I couldn't put it in the laundry-bag.(1) I want to play with Edwin.(1) My bloomers are down. I can get my bloomers up. What did you say? Mamma, you'll have the bed made when I get back.(1) I can't put all the shirt in the laundry bag. All right. Whoa, there. I'm putting it in the paper anyway.(1) I'll hold the dust-pan.(3) No, I didn't. This is Uncle Ralph's prayer book. Yes. He prayers with it. Down town. I saw it down town. Uncle Ralph.(2) That went high, didn't it, Papa? (1) Went on the piano that time, didn't it? Ha, it went up and hit your head, didn't it, Papa? It went up and hit the ceiling that time, didn't it, Papa? Didn't it? Aunt Laura, you watch this. It hit the light that time. You do this.(1) I want it.(1) There went the card. There they went. They went up and hit the ceiling. It's going to go up and hit the ceiling, pretty near. Pret' near that time, didn't it, Mamma? Wonder when Uncle Ralph is going to come. It went right in your rocking chair, didn't it? It went right behind the stove. That's a funny trick. It's going to go up and hit the ceiling, pret' near. Here it goes up to hit the ceiling. It's clean anyway. That piano stool? Isn't it? Can I — — may I clean it then? This is the cloth. Is the stool clean? Mamma, I won't fall if you don't hold me. Rock, rock, rock (hums). I can hold little doggies though. Papa, one day I and Mamma went down town and we saw a little bit of a dog and he was white-headed. And we got past and looked at him and he — and he — and he was white-headed and he belonged to a man and he — and he — —. That's all. Mamma, I told Papa a story. Now I'll tell you one.

11:00 A. M. Once there was a little girl named Goldilocks and she went walking one day, went walking in the woods one day. And she came to the funniest little house and it was the Bears' house and there wasn't anybody home — — and she knocked and knocked and knocked and then the bears came and growled — — — and, no — —. What did they say? What do bears say? Oh, yes, and they didn't

come then. And she sat down in a great big chair and she took the great big spoon and tasted the soup and it was too hot. And then she sat in a little chair just like this and sat the bottom all out — and she took the little spoon and tasted this bowl o' soup and it was just right. And it was just right and so she ate it all up. And she went upstairs and lied — no, lay down in Papa Bear's bed and it was too high at the head — — and — and she lied — — she lay in Mamma's Bear's bed and it was too high at the foot and — — and then Baby Bear's bed — it was just right — and she slept and slept. And the wolf came and said, Good morning, Red Riding Hood — and the wolf went ahead and Riding Hood went and took the basket with bread and butter and jam and put it on the table — — and — and then the bears — — — ah, that's all. I want some writing some time to-day. Aunt Laura, you get me some writing. What can I do? I want some writing some time. I want some — —. Mamma's going to write me down some words. Mamma, write me some words. Papa, I'm writing a letter — pretty soon I'm going to put it in the mail box. Then pretty soon the mail man will come and get it. Aunt Laura, what are you going to do? Who are you going to write to? She's my Grandma. Oh, I made a man with feet as big as yours, Papa. Oh, I can understand baby-talk. I can. Four of us — — five of us are writing. You're one, Papa's two, Aunt Laura's five — — Aunt Laura's three, and I'm four. Uh, huh. I want to count over. You're one, Papa's two, Aunt Laura's three (1), four of us are writing. What time does Uncle Ralph come home? Isn't this seven o'clock at night? I'm hungry.(1) You said you's going to get dinner. You're two, Papa's one, Aunt Laura's three, and I'm four. Mamma, is the oven hot? (2) Don't want the door — —. Papa, I'm going to put your book away — — bounce — bounce (hums). Aunt Laura, who's is that? Isn't it Papa's? Is it Uncle Ralph's? Where's the ink? Isn't this book Papa's? Isn't this book Papa's any time? Now I'll put this up. I won't rock this when I'm on it. I won't bump the piano stool when I'm on it.(1) Why wouldn't you buy me a bigger chair than this one? Now look — — it's little and I want a bigger one. Lyle can take this home and keep it. I don't want any rocking chair any time. 'Cause it makes me fall and break the plaster. So I don't want my rocking chair any more. I'm going to send it to Lyle. Looky how big I am. I'm twelve years old. Play I'm twelve years old.(2) Aunt Laura, I'm twelve years old — — so I can get my sleeves down. When I'm three years old I can't get my sleeves down, but I'm twelve years old so I can get my sleeves down. I'm big for this rocking chair. Uh, huh, Aunt Laura, he'll take it if I leave it there. It's warm outdoors. I want to do that some time, don't I? I want something to eat, Mamma.(3) Papa's one, you're two, Aunt Laura's three, and I'm four. Oh, is that your nice new pencil? That one's Papa's nice new pencil. Isn't it, Papa? Can't I help you any day? I want to do something some time to-day. Mamma; the oven's hot.(1) So I want something to eat.(1) When I was little I spilled milk and I had to wipe it all up. I'm twelve years old now. It's the egg-beater. Papa, I would like some salts, too. 'Cause I'm sick. Bet you I'm sick. We take salts when we're sick. Papa, are you sick? Then what'll you do? And eat salts? I said "drink salts." It was me — — it was I. Give me some.(4) I want — — I want a drink out o' that glass. What are you going to do now? I want a drink out o' that glass.(1) I can't hang it on the cellar door. Mamma puts it on the floor sometimes. Can I sail? (1) I'd rather wear my slippers. I'll put my slippers on. I'll go over to Mamma. I won't tell you — when I went in there to get one more egg. I fell

down when I went to get one more egg and hurt my knee. I'm twelve years old — — I don't cry. Uh, huh. Not any time. Well, then, why do you say "cry" again?(2) I ain't. (To the milkman.) Fine. Fine and dandy. That dollar's for you. I'm fine and dandy. (Coming in again.) I'm hungry. Dinner's ready. I want something to eat right away.(2) Do you? I do. Are you?

12:00 M. (At the table.) I want to be closer. All right. I be'd still long. I wasn't telling you that. I was telling Mamma. Mamma, I be'd still a long time. Mamma, what is "be'd"? What is "be'd"? Oh, I was still a long time. I was talking to Papa. No, I was.(5) I was talking to Papa.(3) How do we make high chairs, Mamma?(1) Aunt Laura, where's my — — here's my fork. Give me my knife and spoon, and fork and knife. Am I dressed?(3) Will you put that down, Papa? Dinner is served, Mamma. I want some potatoes. Papa can have that side of the table. I want closer. Mamma, what shall Papa do? I want some potatoes. Which town?(1) Oh, Boulder. Here I am. Give me my — — I want my spoon,— to get it off. Put it in my dish. Let me butter mine. Which way? I'll mix 'em. Mamma, I got cracker in my egg. You got crackers in your egg, Aunt Laura? What you got in your egg? I want some gem, too, to eat in my fingers. I mean to eat in my mouth. I want some more crackers in my egg. I said my egg wasn't very good with crackers. My egg isn't very good. I want some more jelly. I don't want another egg. I want another gem, though. I want some jelly on mine. I want some milk.(2) We ate a lot, didn't we? I bet ten cents I didn't get my bib dirty. Where is it? Egg? Uh, huh. (Leaves table.) I want to see if I can do that. Don't. 'Tisn't cold. 'Tisn't solid. 'Tisn't soft. It's cold. Uncle Ralph had it one day.(1) That little Hay boy said I lost that one day. Then I want to go out. That won't be sad. Ting-a-ling — —(25). We're both in here. Aren't we?(1) Can you do that, Aunt Laura?(1) That kind o' trick? Papa, could you fall off the step and hurt you? I want to see if I can do that kind o' trick out here again. Didn't hurt that time. Ting-a-ling —(25). Look at what my Mr. Stocking done. Ting-a-ling — —(25). That's the train. What's that outdoors — out with Lyle? Where are they, Mamma? Mamma, Mamma.(4). I want to play — — —. You want me to wheel out on the porch so I won't make so much noise, don't you, Papa? Papa wants me to wheel out on the porch so I won't make so much noise. I'll show you how you want my little baby buggy, Mamma. Papa, I'll show you how you want my little baby buggy when I wheel it in the kitchen. Papa, you want this in here and this stick in here. I'll fix it so it won't make so much noise when I wheel it in the kitchen. I want a hammer. I'll show Papa how he wants my buggy fixed to-day so it won't make so much noise. Papa, how do you want my buggy fixed?(3) So it won't make so much noise?(1) This way, Papa? Mamma, where are you going?(3) Where's Papa going? Where are Mamma and Gladys? Aunt Laura, I am going to be dressed up. Uh, huh. Here's one o' my hairpins and you can have it. No, there, I want one.

1:00 P. M. (Out of doors.) I want to go a little ways, Papa. Can I? He says I can't go. I want to go some time. Can't I go neither to Webb's? Aren't you going to the University? Aren't you going to the library? Now he said, "No." You and I are going to stay home, aren't we, Mamma? Mamma, 'ess run round the house. Run round this way. I want you to run. I'm goin' to run and I want you to run with me. I don't see it. In here you left the water last night. In here you spilled some last night. Mamma isn't going any place, 'cause she isn't going to do anything, are you, Mamma? I'll watch,

Mamma. I'm going to watch.(2) Oh, I see the mail man. There he comes. Yes. it is. Hello. You and I like to be out, don't we, Papa? Where are you going? I am fixing my rubbers. He (a neighbor child) wants to tell me something. Can I put my hood and coat on and play? Can I, Papa? Lyle, I can't — — I can't come and play. Can I fix my rubbers outdoors, Papa? Harold, Papa said I could fix my rubbers, but I couldn't go out and play. Hello, what are you going to do? Our grass? Whose grass, then? Oh, you, Jack (the dog). Jack wants to kiss me. Are you going to trim Lyle's grass? You going to trim your own grass, then? Once I caught Jack in my arms — in my hands. No, you won't. This is something that sprinkles out — to sprinkle with like that. With this off and something I don't know on it. We do that to the grass when we sprinkle. The coal man is giving us some coal. Harold, look where the water went. It went on the sidewalk. It was in there. Yes, it was. Aunt Laura, good-bye. Papa left his knife out here. Here's your knife. I'm going to put my slipper on myself. Look, this is a little stick. It used to be this way, but it isn't now. Look, that (the wagon) is going to go out, Mamma. Those horses are going out. The coal man gave us some coal. There's somebody's auto down there on Seventh Street. That where the auto is, is Marine Street. Ruley's live on Marine Street. We live 483 Marine Street. I can't. Don't eat it yet. All right. I'll give it to you, Jack. He brings it back for me to throw it again. It didn't go in the street. Jack, good catch.

2:00 P. M. (Still out of doors with her mother.) Jack stepped on my toe.(1) Now, Jack, I'll throw it this time. Here, Jack. He is going to get it now. Why don't you throw this? I am going to see if he'll go and get it if I throw it. I'll make him go. Jack can run. I've got a blister on my heel. I want to throw it. You were going to let me. You can't eat it yet. I can't throw it far when I'm sitting on the steps. That woman is tired out when she's walking and so she's riding in something I don't know. (A woman passed in a wheel-chair.) Can you do that trick? We got shoes on, haven't we, so our feet won't get cold. I'm going to bring my bathroom box to put my rubbers in. If you don't go away, why, I'll hit you. Lyle, you mustn't climb that tree 'cause Mamma said you mustn't. Lyle, I'm going to have a place for my rubbers. Can you do this, Lyle, Harold? Watch me do a somersault on this grass. I'll do another somersault. I'm going to another corner. Mamma, here's a dead chicken. I'll take it. He doesn't want it. No, it won't. Come here, Jackie. Maybe Jack will eat them. I'm throwing the can so Jack can take it when I throw it. Now you let me take that. Mamma, you come and see the old hen and chickens. They are eating dirt. (Swinging.) I pretty near touched this. The dirt came up into my eyes and it hurt my eyes, too. That's the way I swing. Isn't it, Mamma? Her Mamma already mended that little girl's shoes, but my slippers aren't mended. Poor Jackie, I kissed him. He wants to eat some of this dirty eggshell and other stuff. Sometime to-day I 'spect I'll step — step in a can of water again. All right. I'll wait for you. I'll look after the old hen. I want to carry the glass of chick-feed. Let me pour the water.(1) This looks like cream, doesn't it? You said you would stay with me. I want to play with this glass.(1) I am a cook to bake. Papa went to the University. He wanted to read. He went to the library. He went to the same one Papa goes to. Books and magazines are in the library. Magazines with pictures in. Didn't you want me to take this little spoon? This big one, you mean? I am just digging in the dirt and playing with the glass.

That's ours, honey. Mamma, that little boy wants to play with our spoon. I don't know what they said — — I'm busy. Jack, I don't want that. I can do without that. Mamma, play you was Papa and I was Mamma. Mamma, you come with me and get a drink this time. Lyle is trying to get Harold to say "Alabam." He'll let you see his book, Mamma. I am going to bring my little rocking-chair out here, too, Mamma. I didn't want to go with Aunt Ollie.(1) Ralph won't hurt my little red rocking-chair. You can sit in it if you want to, Ralph. Ralph had it once to-day. Look what a sewer I dug. We have to be satisfied with "play" ten cents. (Talking to the children playing store.) I'll give you some more ten cents. What? I got a rubber, Mamma. I tore my sample. This is my sample. I ain't swinging too high, am I, Mamma? Pretty soon it will bust — this swing. Mamma said I couldn't play. Lyle let's do this. Then I played with dirt and rocks. I have a little doll-buggy and two purses and a real pocketbook. I can't handle that big broom. Mamma, don't take the spoon and glass. Wait a minute till I get a drink. What is the new style? We do, don't we? I'll go in my house. I'll show you the new style. That's the new style.(1) I want to climb a tree. Mamma, I'll show you what I can do.(1) You turn your head over and see what I can do. You and I have a scrap, Lyle. Let's go and swing. I want to swing.

3:00 P. M. (Goes into the house with her mother.) Give me a piece o' paper. I have to get my box. I got it. Where's my orange? See this water. See how the dirt comes off my hands. Shall I break this orange? I have so many fingers — an' two thumbs. Three, four, nine fingers — — I got. Here's my ear — here's my other one. Here's my eye — here's my other one. There's my forehead. Let's play "Knock at the door, Peek in, Lift up the latch, Walk in." You show me how to knock at the door. Now you do it again. I'd like some more orange.(1) Do you want some more? I didn't eat any. Which one do you mean? I couldn't get it. Is it my clean dress? You unbutton it, please. Oh, Mamma, this is such hard work. Here's my wrist — this is my arm — here's my shoulder — here's my shoulder. And here's my elbow. I hurt my knee. I am putting my clean dress on. I'll show you how it isn't right. This is going to be a funny way to put a dress on. There's the wrong sleeve. Now you button me. Mamma, I'll show you what's the new style. Turn your cap wrongside out. This is old style. That's the way I used to have it, old style. Mamma, let's "hide and go seek." You do just that way. Lyle does it. Somebody else does it, too. Mildred does it. Mamma, let's play I was eight. Let's "hide and seek." Tell me stories — tell me about Goldilocks. Now tell me about three little kittens.(3) What was the names of two little kittens? One day they used to have names. Mamma, I'm not up. I'll fall and break my neck. I'll bite you and then it won't hurt you. I want a drink.(3) I'll help myself. Now I can't see you. I had breakfast. I want something if it isn't dinner. That bite hurt me. It did — right here. I want to see you write. Charlotte was a baby. She was a little tiny baby — she was in a basket and she squealed. And they were going down town and they had a buggy and Charlotte's Mamma put Charlotte in the buggy. Mamma, we don't comb hair with pencils, but with this comb. I'll put it in my hair. Mrs. Bartato has lots o' things at her house. Some little birdies in the house and they sing songs like I do. They live over there in a cage. I like to have birdies sing. I do. Don't. Let's play we were two little kittens. That's my mouse. Now let's begin to quarrel and fight. I will have that mouse. Now play the old woman came and she swept us right out of the room. We'll

be good little kittens. She swept us in again and now we're by the stove. Let's do the quarreling over. I'll have that mouse. It's so cold and stormy — meow — meow — meow. Let's do the quarreling over and over. I'll have that mouse. Where is the mouse then? I don't see it. Mamma, we went to the picture show one day in the University, we did. And once we went out to the farm and there was an incubator. It was to the depot, too. After she puts eggs in the incubator, then what will she put in? I want the pencil. Play you had a big comb and play I had a big comb. Oh, there are snarls in my hair. Where's my dollies? I'll give you two dollies. No, you have Teddy and this one dollie and I'll have this one and I'll come and visit you. How are you this mornng? I'm fine. I got nine chickens. Yes, he's all right, but sometimes he's naughty and he runs away over to Mrs. Daniels.

4:00 P. M. (Her father comes in.) What did you get me, Papa? What did you get Mamma? Let me see if it's peas. (Plays visitor again with her mother.) How are you this morning? No, you are pretty well. I am going right straight home, I am, when you say that way. I won't come and visit you any more. Papa, I want a taste. I'll play with Mamma some more. I want to taste Papa's orange. What is in here? Here are the onion sets. Can't I see the onion sets? I want to see some onion sets sometime to-day. (Goes out of doors with her mother and father.) Papa, are you going to stay out here a little while? Papa says he's going to stay out here a little while.(1) Papa, you'll be lonesome if I go in, won't you? Papa, bet ten cents I can kick you. Bet a dollar I stepped in a can o' water. I want — I'm going to throw this old, dirty, old wire away. I'll bring the swing over there and then you do it. You do it. Can you reach it if you do it? Little chickies can't reach it, can they? That was a funny trick, wasn't it? That was a funny go-down. So this will be a garden. It isn't good any more 'cause it's got lots of rotten apples in it.(1) Mamma, I'm going to go this way.(1) Papa, 'ess make a "bum" fire out here 'cause I want a "bum" fire. Now you watch it. I'm going to twist up, Mamma. You go round here and swing. I don't fall out the swing when I do this. Uh, huh. Doesn't hurt. I'm goin' to swing that way. Is this Christmas? When is it Christmas? You watch me do this. This'll be a good garden here, won't it? Won't this be a good garden, Mamma? Won't it? That's a funny trick, wasn't it? Mamma, that's a funny trick. That was a hard trick. I'm going to work up, Mamma. Mamma, I'll show you how to work up when I'm swinging. I'll try to swing high and then I'll be working up. That wasn't working up. I'll show you a new way to work up when you're sitting down. I'll wait for you, Mamma.(3) I'm coming right after you, Mamma, so you better get out of the way. This is a good garden, Mamma.(1) I kicked your apron. I can't kick you now.(2) I'll get my slipper in this can o' water now. Papa, is it "before" or "ber-fore"?(3) Mamma, I'll swing right into you now if you come back here, 'cause I can't stop, so you better keep away. I'll do another perform.(1) I'll do another performance, so I will.(2) Oh, that was a funny splash on my stocking. Got some on my dress, too. I'll throw it away. Does Mamma want some (water) for the little chickies to drink? Dresses don't get dry, do they? Mamma, I got my dress wet when I made that splash.(2) Now the little chickens can't get in to drink, can they? I'm going to swing this way.(2) I'm going to twist up.(2) Here it's dry — here it's wet — here my dress is wet. I heard you say it was "be." (BE the first syllable of "before.") And is it 'heard,' Papa?(1) Oh, that's right. My hands don't get cold like

it's cold weather to-day, do they? Yours don't, do they, Mamma? My hands don't get cold like it's cold weather to-day, do they? My stocking's dry.(1) I'll kick you again, Mamma. I will — I surely will.(2) I'll bet I can. Now I bet you I can. Papa, will you raise my swing a trifle again? All right, I can swing in it. It's a long, long, long, long time again before another day. All of my things are dry, though.(2) Well, I can feel of it. My dress isn't dry. It's wet. Is this the one? I want this pan to sit on. I ain't going to do any more perform till I get dry. Here's one o' Mamma's things, right here. I musn't take it out, must I? Uh, huh. 'Cause it's Mamma's. Here's another one o' Mamma's that I mustn't pick out, must I?. Mustn't pick out all of 'em, must I? What can I have to stir with? Here's something to stir with. There's another thing that I mustn't take out in here that I never seen. This thing is deep. There's a worm coming out — see it — see it.(3). Here's the worm. Worms are what we put into something. I'll find another worm. I will. I surely will. It's deep enough to find another worm. Looky, how much I can get. Papa, can you haul any like this?(1) I can't. Now I found something more.(1) Is that "somepin'" more? Where's the other one then? I found an apple peeling. Uh, huh. I had to throw it away. We throw apple peelings away, don't we? This is bad stuff in this pail. I'll get a pail to put the bad stuff in. I'm going to keep the good stuff to put in my pie. Goin' to put some stones in. I won't get my dress all dirty. I found something. That's Mildred going some place. Isn't that Mildred? Guess it is. You watch I can do when I'm over here. It's a cold day, isn't it? It's warm, isn't it? Isn't it warm then? This is bad, too. All of it's bad. I got the pail this time.(1) Now see how far I throw. This'll make a big pile. You watch it now. See it made a little pile, didn't it? I'll get another pail of it. I got a big pile now. Is it piled? Over here's a place for dirt. I'm makin' a big pile. I found another. I found another.(1) What are these? I don't know. When Mamma comes she'll tell me. Maybe I'll find another thing. Oh, that's a great big pile.(2) I'm going to make another great big pile. That makes great big piles. I found another. Some of this is good. This — ee — ee! I'm going to bury this. I'm going to bury this tin so it'll be good.(4) (Sings, "I'm going to bury this, bury, bury this," over and over.) Havin' hard luck with that train down there, aren't they? I found something, but I don't know what it is.(1) I bet it's a peanut.(1) Dirt on it. We don't eat dirt, do we? Scrape dirt off, don't we? I'm going to bury this. I'm going to bury this peanut. We bury peanuts, don't we? Sometimes when we have good peanuts, we eat 'em, don't we? Now it's buried. I don't know where it is. Is "bury" right? "Very" isn't, is it? The old hen's scared. She goes, "Uh-h, uh-h, uh-h" when she's scared. I'll find something in there. I see something and I'm going to take it out and see what it is. But it's onion.(3) This is onion.(2) I'm going to dig it out. It's hard work. See what it is, it's onion, so I'm going to use it. I'm going to chop it in two.(1) I'll find something else, I'll bet. I will. I'm going to find a little bit of a place for this onion. When Mamma comes out, I'm going to give her this. Bet it's a rock. I throw that rock over where the dirty and nasty things are 'cause it's a rock. Wonder what this is. Oh, I see something. Looky what I found. That's a funny thing, ain't it? This is going to go in here, isn't it? It did. I'm going to see if the paper boy left us a paper. That paper boy didn't leave us any paper so we — —. Papa, you stay out here with me, so we can play. I found a little bit of rotten apple. I'll throw it over. It didn't

go over. Looky what Gaylord is. Gaylord is swinging up high. See. That went in here. Whee. 'Spect it's a windy day. I'm going to put this somewhere. Now it's going round. This is going to be grounded right here. I'm going to find another pan. I hear the cow — moo-oo — — that way at Grandpa's house. Mamma left this dipper out for me.(3) Here, here, I found something. It's a peanut. I'm going to open to see. You open this. It's good, isn't it? So we better not bury it 'cause it's good.(2) I'll stand still in the swing. I'll sit still and watch those kids. Wonder if those kids 're going to climb out Campbell's tree or not. What does lost — —? Is "lost" right? Can you do this? Can you? I like — — I like — — what is "like"? I like peanuts. Looky, Papa, this swing hurts me. There I went. Found another peanut. I got somepin' good. I'm going to tell Mamma I found somepin good. I got some peanuts.(1) Mamma, Mamma — —. Where is she? Where'd she go? I want to — — —. Can't I go with?

5:00 P. M. (Goes into the house with her father.) Has Mamma been writing over here? Doesn't this fit? No, it doesn't, Papa. No, this doesn't.(1) Papa, got another new iron.(1) Aunt Laura, I'm hungry. I want something to eat. Uh, huh. Hello. That isn't many as I brought. I can see away out to 'em. I can't see away out to Helen.(1) I want to. I ain't going to go out doors; I'm going to get a chair. Mamma, I had two peanuts.(1) I don't see poor Aunt Ollie. Uh, huh. Aunt Laura, did you change your mind? Did you go out to your farm? I can turn the water on.(1) I'm going to wash my hands. Mamma, didn't you say you'se going to get me some warm water? In the reservoir there is. Mamma, I want some warm water. Papa, let me move this chair out. I want to watch Mamma. There isn't any warm water. I got some soap. Each of us an orange? All right. I want something to eat. I want one.(1) Mamma, I have one. I have one and you have one. I'll wheel the whole bunch till somebody wants one. I want to peel one. Mamma wants one. When she comes in she'll tell you she does. Nothin'— I ain't going to tell Mamma I'm going to have an orange. Papa's goin' to give me one right now. Are you, Papa? Now I got one — now I got one.(1) Don't break it in two 'cause Papa wants me to eat it like apples.(2) You won't break it in two, will you? Mamma, you want an orange? She said, "No."(1) Now I'll go down there (to cellar) — — I surely will. I will.(4) Now you just watch me.(1) Papa, can I come down there? Aunt Laura said I could come down there, Mamma, is it all right when Papa said I could come down? Mamma, see me down cellar. Now I beat you, Papa. You watch what I can do. You — — in here you left the camphor-oil. That buggy is big for me, Papa. Aunt Laura, I'll show you what is a new style. Turn the cap wrong side out. Don't I want that? Don't you do that again. I want it — — I, I want that cap. Will you do that again? I'll come back. Now see what you went and done. You done that yourself. You pushed me over. Oh, yes, you did. Will you do that again?(2) Papa, you give me that cap. Please, I want my cap. I want — —. There Aunt Laura, you play "hide and seek." You know how to play "hide and seek." Lyle does. That's the way to play "hide and seek." There isn't any — there aren't any. Where are the crackers? Mamma said there weren't any crackers, so we can't have any when they're all gone, can we? I want some meat.(1) It's away down where the horse is. Mamma, I want my dinner right on the stove. Want your pencil? Does it hurt your finger? You said it did. I want some oatmeal. 'Tisn't "grow." It's "grown." Isn't it? You don't know what it is, do you? When the little chickens grow, they'll be big and

then they'll be mine. I'll feed 'em. Yes. Harold had something to-day. I ain't going to tell you.(3) What is it? Do you, Mamma? I ain't goin' to tell you, I am goin' to tell Aunt Laura. Where I was and Lyle. Oh, out doors and Mamma came and got me and says I must come on home. He was goin' to break one o' Lyle's wheels on his auto and Lyle didn't like him. 'Tisn't "before," it's "ber-fore." Isn't it "ber-fore"? It's "berfore." He telled me to call. He told me to tell. I'm taller'n Ralph. If you give me some thing, I'll give you something, Aunt Laura. Oh, some candy. That little table out to your house? If you give me some candy, I'll give you some candy when you have a big table. Did you bring it over to your house? I'm going to eat on it next winter. I used to put my finger under my nose and keep it there when I was bigger than you. 'Tisn't "me." It's "I." Papa, I do use "Goldilocks." (2) I want some oatmeal — I want more oatmeal.(1) Mamma's going to give me some. Don't give me very much more. Let me do this. Do we have a clean piece when we have dinner?(1) When I get this ate up, I want some more. You just wait when I get this ate up. Mamma, I'm — Aunt Laura, I'm twelve years old yet.

6:00 P. M. (Still eating supper.) No, you hurt me. Pretty soon I'll be wanting some more oatmeal. Here are little pieces of oatmeal in my milk. Mamma, I want more oatmeal. I want sugar on it. Put a little bit of sugar on it. Your meat is spilling, Mamma.(1) Next year will be Christmas, won't it Mamma? Want some more oatmeal, please.(1) I ate it. I eat it.(2) That's the way the train-man says it. Aunt Laura. She's reading. Aren't you, Aunt Laura? Trainman.(3) Papa, you got "engine" down?(3) Is this kind o' sauce good for me? Papa said this kind o' sauce is good for me. White peaches aren't good for little girls.(2) We ate the white peaches all up. That's good for each one, isn't it? I'm goin' to give you a lot o' candy. Have you got "engine" down? You showed me the engine one day, didn't you? I heard it go when you showed it to me. Mamma, I want some sauce.(3) Mamma gave me some sauce and it has some milk in it. Papa, there's some milk in it. Papa, there's some milk in the sauce. When I get this all eaten up, there'll be some juice. I want a peach.(1) That was a sauce. Here.(12) All right. I had supper. What then? Right now? I want to.(1) Turn the light on. Will it be light then? It'll rock over where the piano is and so we better put it over here. Oh, Mamma, it's pretty heavy. Great big bed like this is pretty heavy. Oh, that's pretty heavy. And leave the door shut? And turn the light out and leave the door shut? You will? Here's my ankle. Oh, Mamma, have I got another blister? Is it? Is it a blister? Now I want to. I wasn't pulling the cord. Now, now, Mamma, I want to. I won't hurt your paper, Papa, if I stand on it. It hurts. No, I don't want Mamma to paddle. No, 'cause I can get my night-gown on all alone. You're goin' to stay in here, aren't you, Papa? Yes, so I won't be lone-some.(1) 'Cause I like you if you do. Now, don't you help me. Is this night? Now don't put your finger in. Now I'll get it right. I don't want you to button this 'cause I'm goin' to button two buttons. Leave the door open.(6) Are you goin' to stay out there all the time? Then I'll be lonesome. 'Tisn't "them." It's "those." Yes, I'm covered up. I can't see you. All right. When is Mamma goin' to eat her big chickens? She says she's goin' to eat 'em next summer. And then Grandma Brandenburg can have some of 'em. And then when Mildred and Mrs. Gregg come next summer and we have fried chicken, won't that be fun? Um, um, that'll be good — um-m. Won't that be fun? Mamma, I'll be Santa Claus if you talk through the telephone. Hello

— — hello. When we was over there we had a little doll buggy and it had a white cover on it. Papa, come in now. It's occasionally now so come in here. (Her father had said he would come in occasionally.) Is "occasionally" right? Is it "occasionally"? An' then will you go back there? That isn't where you sat. Uh, huh. Not in that rocking chair. It isn't. I saw you sit in that one way over there, so you did. I saw you. But is that one too warm? And so you had to sit in that one? One — two — three — four — five — — six — seven.(1) What is this one, Papa? This one's four. This one's five. This one's six — and — this — — one's seven.(2) 'Ess count these. Seven — — seven — — — seven. Play these were all of 'em seven — — and any of these weren't seven. Seven — —.(12) This'n's three — — and this'n's — five. That motor is running or is it a bicycle? What is a motor? Do you 'spect it's goin' home? Now play each of 'em was one — and all of 'em — and that down there that I couldn't reach. Where's Mamma? Writing? Like you're writing in here? All right. Is she reading? I hear her reading the paper.(2) Bleed — — blood. It's "bleed," isn't it? Bleed — — blood. Mamma says we mustn't climb trees so I ain't goin' to climb trees. Can you do that kind o' trick? One — two — — three — — four — — — five — — — — six. This one's four. I can find a blister. (Her uncle comes in.) Where you been, Uncle Ralph? Over to Sutherland's? What'd you do out there? And the same day you do everything, don't you, Uncle Ralph? Yes. Get up and dress and eat dinner. And then what else did you do? Milk the bossy cow and give him his dinner? My nose is dirty. I need my handkerchief. Now see how dirty it is. (Falls asleep at 7:20 P. M.)

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A CASE OF RETARDED SPEECH DEVELOPMENT

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This child, a girl five and a half years old, was first brought to my notice in the autumn of 1911, when she entered one of the city kindergartens. The expression of her countenance was that of a deaf mute and she seemed unable to utter a word, though she was not deaf. She showed an interest in what was going on by following it with her eyes and smiling pleasantly, but at the end of four months she had not said a word to teacher or child, nor had she voluntarily taken part in any of the activities—indeed, she had not learned to walk or march in a straight line or on the circle.

Physically she was somewhat over-sized and walked with a heavy lumbering movement, mostly of the hips—a spastic gait. Hands were uncertain in movement and grasp;—she could not use scissors with either hand. There was slight lateral curvature of the spine and flattening of the arches; but the reflexes seemed normal, with the exception of a clonus in either ankle. The ear cavity is somewhat peculiar in shape, though the hearing seems normal. The lower jaw protrudes sufficiently to allow her to hold the tips of two fingers within the lower incisors. This habit, which seemed to be an evidence of timidity, for a time disguised the fact that she was a mouth breather. Adenoids and tonsils were removed the following February and I began to work with her for the development of speech.

In my first visit to her home, I saw her romping with the three-year-old sister and heard her make a few babbling

sounds which the family, and especially the little sister, understood readily. Most of her communication, however, was by signs, pointings and leadings. Three weeks after the operation she began definitely to attempt to say words in a whisper, but so indistinctly as to be beyond analysis. The words were saucer, cup, pocket-book, dog, chair, hat, table, bed, towel, man, horse, bird, Washington, spoon (poon), knife (mnī). In fork she had no idea how to get the "f" (besides, she was physically unable to get the lower lip under the upper teeth), but in trying to imitate me put her tongue out between her teeth, as th. At the end of six weeks she began gradually to vocalize. She could now whisper a number of words, the clearest beginning with m, b, t. and p. The first words vocalized were bow-wow (squirrel), mumĭ (music), and two.

Nearly all of the words given below were first said spontaneously in our games and activities (she was told the names of a few things that she did not know) and afterward repeated incidentally, so that she might hear the correct sound. Not for several months was anything like drill attempted. I have endeavored to reproduce as nearly as possible her first attempts and later efforts in the order in which she gave them. For a long time there was a sort of shadowy m that preceded or took the place of the initial consonant. This seemed to be due to the mechanical, hinge-like way in which her lips opened for enunciation.

Mar. 20. Whispered tā ŭ—table, too ĭ—too big, pĕ th—pencil, bēthe—beads, boo—broom, nthwee—sweep, wăthŭ—wagon, tĭ—stick, pāpŭ—paper; slightly vocalized pĕmpŭ—pencil, wĕ—red, bô—boy, ort—horse, boo—blue, bŏ—box.

Mar. 22. In a game she shouted "Yaddy" (ready). The following words were fairly well vocalized: tŭ—one, two—two, tō—three, tōa—four, tī—five, ŭbbŭ—eraser, bō—board, tĭ—stick, mūma—ruler, lī—lines, pĭppa ŭ—pick it up.

Mar. 27. Manner extremely shy. In most of these words a labored vocalization in very low tone and pitch: Nä dä dĭ oo tă—now going to give you tag; a wī, Lilly—all right, Lizzie; Dordie—Georgie; ö oo—you'll look; mā ŏ—make a house; mā daw—make a saw; pĭ ă ŭ—pick that up; tum, Gwaty—come, Gracie; Ätĕ—Ethel (her own name).

Apr. 16. In a hoarse whisper; power—flower, Mama—Elisabeth, Ĕa—Yetta, pĕmpa—pencil, mĕma—yellow, dă—grass, dē green, wĕ—red, boo—blue, mnă—chair.

Apr. 18. Mūmĭ—Susie, Mommy—Polly, too—shoes, mŭ—girl, mĕ—yes, bô—boy. Sounded sh separately with effort, but could not connect it.

Apr. 23. Daw—doll, bŭ—butterfly, tow—cow, dŏmthĕ—

donkey, bāby (whispered), book (whispered), good mor(ning) (whispered). Sang "By-bā-by" (By, baby, by) in low monotonous drawl.

Apr. 25. Dĕ—desk, thă—chair, gă—electric bulb, tā—table, dă—glass, bŏ—blocks, mĭma—window, pĕmp—pentĭ—pencil, Pŏ ĭ—Polly, Tudy—Susie, mămŭ—wagon, boo—book, doo—door.

Apr. 30. Dō tē, Tudy—Go to sleep, Susie; wā ŭ, Tudy—wake up, Susie; donkey—blanket; hĕ mē—help me; dĕ—dress; too—shoes; daw—drawer; bŭ—buttons; ămker—handkerchief; pĕntŭ—pencil; tha—chair; tŏ ĭ—stockings.

May 2. Tĭ-tē—Christmas tree, tŭ—shovel, dongĕ—domtet—blanket, tĭttĕn—chicken, teep—sheep, mtow—cow, ho—hog, dō—goat, mā—rake, hort—horse, bō—broken, tē—tree, ou—house.

May 7. Tā Tudy—take Susie; hĕ ō dō—help me to open the door.

A review of words gave the following: nā—nail, tow—cow, boy, hor—horse, mĭ—pig, tĭ—chicken, tĭta tē—Christmas tree, dă—grass, dŭ—girl, mămŭ—wagon, bŏ—blocks, bī—good-by, pĭdda—pillow, dō tē—go to sleep, pĭ ŭ—pick it up, pĭpĭ bă—put it back, dub—gloves, pĭta—picture, dĕ—dress, tă—chair, ŏ—house, hĕ mē—help me, boo—book, Ăta—Ethel.

May 9. Dongĕ—domtet, bantel—blanket, hort—horse, mwĭttĕ—whistle, o—hole, teep—sheep, āton—apon—apron, pĕmpĕ—penthul—pencil, pu ā on Pŏ—put apron on Polly, toot—foot, too—shoe, tā—tail, ĭdda—ribbon, pu ĭ ā—put things away, hĕ mē—help me, bŭ dĕ—button dress, că bŭ—I can't button it, tā ô—take it off, gō bī pentŭ—goat bite pencil, dō bī mē—don't bite me, līda—lion, tĕ bă—teddy bear, mumty—monkey, ĕmbĕ—elephant, dump—jump, bō nĕ—broken neck, bow—bounce, pĭpy ŭ—put it up, tă ŭ—tă dŏ—stand up.

May 14. Tăm tā tăna—I can play piano; wa ŭ tă, Tudy—walk up stairs, Susie; dō tē, Pŏ—go to sleep, Polly; tā tăna, Pŏ—play piano, Polly; dō tē, Pŏ—go sleep, Polly; domket—bamtet—blanket; tĭtta tē—Christmas tree; dĕ tĭt tô mē—get it for me; ting—string, pāpy—paper, pentul—pencil; mā ou—make house; dhī mĭ—I like milk; tărtĕ—carpet; tĭppĭ—mĭttĭ—whistle; date—rake; tŭbba—tŭbda—shovel; hort—horse; domty—donkey; pĭ—pig; tĭĕn—chicken; wun—run; do—dog, bōpten—broken.

May 21. Pitta—pillow; dĕ pu on Pŏ—dress put on Polly; mbŏ—block; mēmŏ—tēpo—teapot; aton—apron; dĕ tô—dress off; umbuppa—unbutton; nīdow—nightgown; k k toat—pĕppĭtote—petticoat; ătter—wrapper; bĕ ăr—bend your arm; hamtit—handkerchief; Pŏ doo tī—Polly's a good child; mboo—book (nearly a clear b, and just a suggestion of the k).

May 23. Domtĕ—bamptĕt—blanket; dum—drum; tate—plate; ĭtta—whistle; dō—bō—blow (fairly good b); bam—bank; Tăn Ta—Santa Claus; tī păn—frying pan; tĭ—kitty; tauter—saucer; Lĕttĭ dot one—Lizzie got one; bĭ ŭ—big one; nŏmdi—nīnŏm—nightgown; loo—look; pupä?—put on?; but it—button it; tie it now.

Classification with reference to reaction to number of syllables. One syllable:

bēthe, beads (whispered)	dō, goat
boo, broom (whispered)	mā, rake
nthwee, sweep (whispered)	hort, horse
tĭ, stick (whispered)	tē, tree
tŭ, one	hou, house
two, two	nā, nail
tö, three	tow, cow
tōa, four	dŭ, girl
tī, five	bŏ, blocks
bō, board	bo, boy
tĭ, stick	hor, horse
lī, lines	mĭ, pig
dă, grass	dă, grass
dē, green	dub, gloves
wĕ, red	dĕ, dress
boo, blue	tă, chair
mnă, chair	ŏ, house
mŭ, girl	boo, book
mĕ, yes	ō, hole
too, shoes	teep, sheep
bô, boy	toot, foot
daw,doll	too, shoe
tow, cow	tā, tail
book (whispered)	dump, jump
dĕ, desks	ting, string
thă, chair	dāte, rake
dă, grass	pĭ, pig
bŏ, blocks	wun, run
boo, book	dŏ, dog
dō, door	mbŏ, block
dĕ, dress	mboo, book
too, shoes	dum, drum
thă, chair	tate, plate
teep, sheep	dō, bō, blow
tow, cow	băm, bank
ho, hog,	loo, look

Two syllables:

tā ŭ, table (whispered)	ö oo, you'll look,
too ĭ, too big (whispered)	mā ŏ, make house
pĕ th, pencil (whispered)	mā daw, make saw
wăthŭ, wagon (whispered)	Ătĕ, Ethel
pāpŭ, paper (whispered)	power, flower
yăddy, ready	Ĕa, Yetta
mūma, ruler	pĕmpa, pencil
Dordie, Georgie	mĕma, yellow

Mŭmĭ, Susie
Mŏmy, Polly
dŏmthĕ, donkey
baby (whispered)
tā, table
mima, window
pĕmpĕ, pentĭ, pencil
Pŏĭ, Polly
Tudy, Susie
măm̆ŭ, wagon
donkey, blanket
daw, drawer
bŭ, buttons
hĕ mē, help me
pĕntŭ, pencil
tŏ ĭ, stockings
tŭ, shovel
dŏngĕ, domtet, blanket
titten, chicken
bō, broken
bī, good-by
pĭdda, pillow
tĭ, chicken
măm̆ŭ, wagon
pĭta, picture
hĕ mē, help me
Ăta, Ethel
dongĕ, domtet, blanket
mwittĕ, whistle

pĕmpĕ, penthul, pencil
ĭdda, ribbon
hĕ mē, help me
lĭda, lion
mumty, monkey
tä ŭ, tä dŏ, stand up
domket, bamtet, blanket
pāpy, paper
penthul, pencil
mā ou, make house
tärtĕ, carpet
tĭppĭ, mitti, whistle
tubba, tubda, shovel
domty, donkey
tĭĕn, chicken
bōpten, broken
pĭtta, pillow
mēmŏ, tēpŏ, teapot
āton, āpon, apron
dĕ tô, dress off
nī dow, nightgown
ătter, wrapper
bĕ är, bend arm
dŏmtĕ, bamptet, blanket
ĭtta, whistle
tĭ, Kitty
tauter, saucer
nŏmdī, nīnŏm, nightgown
pup ä? put on?

Three syllables:

ŭbba, eraser
pĭppa ŭ, pick it up
pĭ ă ŭ, pick that up
tŭm Gwaty, come Gracy
bŭ, butterfly
amker, handkerchief
tĭ tē, Christmas tree
tā Tudy, take Susie

bŭ dĕ, button dress
tā ô, take it off
dō bī mē, don't bite me
tĕ bă, teddy bear
ĕmbĕ, elephant
tĭta tē, Christmas tree
bō nĕ, broken neck
pĭpy ŭ, put it up

Four syllables:

a wī Lilly, all right Lizzie
by bā by, by baby by
ga, electric bulb
mima, Elizabeth
wā ŭ Tudy, wake up Susie

pu ĭ ā, put things away
gō bī pentŭ, goat bite pencil
dĕ tĭt tô mē, get it for me
dĕ pu on Pŏ, dress put on Polly
Lĕttĭ dô one, Lizzie got one

Five syllables:

Nä dä dĭ oo tă, now going give you tag
dō tē Tudy, go to sleep Susie
că bŭ, I can't button it

wa ŭ tă Tudy, walk up stairs Susie
dō tē Pŏ, go to sleep Polly
Pŏ doo tĭ, Polly's a good child

Six syllables:

pu ā on Pŏ, put apron on Polly
tăm tā tăna, I can play piano
tā tăna Pŏ, play piano Polly

Seven syllables:

Hĕ ō dō, help me to open the door

A majority of these cases shows the requisite number of syllables accounted for; and in those cases where the number of syllables is incomplete the accented ones have been taken and the unaccented overlooked. There is evidence of response to rhythm of accent or emphasis (but not inflection), the most noticeable instance being that of the seven-syllable, where the first, fourth and seventh were chosen.

Omitted syllables and words are in every case, except "I," the unaccented:

bī, goodby
tĭ tē, Christmas tree
bŭ dĕ, button dress
că bŭ, I can't button it
tā ô, take it off
tĕ bă, teddy bear
ĕmbĕ, elephant
bō nĕ, broken neck
by bā by, by baby by
Mĭma, Elisabeth
pû ĭ ā, put things away
nä dä dĭ oo tă, now going to give you tag
dō tē Tudy, go to sleep Susie
dō tē, Pŏ, go to sleep, Polly
Pŏ doo tĭ, Polly's a good child
pû ā on Pŏ, put apron on Polly
tăm tā tăna, I can play piano
tā tăna Pŏ, play piano, Polly
hĕ ō dō, help me to open the door

Words and syllables of equal emphasis give the most regular return:

2-2, dĕ tô, dress off
2-2, nīdow, nightgown
2-2, bĕ är, bend arm
2-2, nŏmdī, nightgown
2-2, nīnom, nightgown
2-2, pûp ä? put on?
3-3, pĭpa ŭ, pick it up
3-3, pĭ ă ŭ, pick that up
3-3, tum, Gwaty, come, Gracy
3-3, tā Tudy, take Susie
3-3, dō bī mē, don't bite me
3-3, pĭpy ŭ, put it up
4-4, a wĭ, Lilly, all right Lizzie
4-4, wā ŭ, Tuddy, wake up, Susie
4-4, gō bī pentŭ, goat bite pencil
4-4, dĕ tĭt tô mē, get it for me
4-5, dĕ pû on Pŏ, dress put on Polly
4-4, Letti dŏ one, Lizzie got one
5-6, nä dä dĭ oo tă, now going give you tag
5-5, wa ŭ tă, Tudy, walk up stairs, Susie

Two out of three syllables are given in seven instances:

amker, handkerchief
tĭ tĕ, Christmas tree
bŭ dĕ, button dress
tā ô, take it off
tĕ bă, teddy bear
ĕmbĕ, elephant
bō nĕ, broken neck

Three out of three, 1.

tĭta tē, Christmas tree

Three out of four, 2.

by bā by, by baby by — pû ĭ ā, put things away

Three out of five, 2.

dō tē, Pŏ, go to sleep, Polly — Pŏ doo tī, Polly's a good child

Three out of seven, 1.

hĕ ō dō, help me to open the door

Four out of five, 1.

dō tē Tudy, go to sleep, Susie

Four out of six, 2.

pû ā on Pŏ, put apron on Polly — tā tăna Pō, play piano, Polly

Five out of seven, 1.

nä dä dĭ oo tă, now going to give you tag

Two out of two, 51.

tā ŭ, table
pĕthe, pencil
wăthŭ, wagon
pāpŭ, paper
yaddy, ready
mûma, ruler
Dordie, Georgie
Ätĕ, Ethel
power, flower
Ē a, Yĕtta
pĕmpa, pencil
mĕma, yellow
Mûmĭ, Susie
Mŏmy, Polly
dŏmthĕ, donkey
mĭma, window
Pŏ ĭ, Polly
măm̆ŭ, wagon
dongĕ, blanket
pĕntŭ, pencil
tŏ ĭ, stockings
domtet, blanket
titten, chicken
pĭdda, pillow
tauter, saucer
măm̆ŭ, wagon
pĭta, picture
Äta, Ethel
dŏngĕ, blanket
domtet, blanket
mwittĕ, whistle
aton, apron
apon, apron
pĕmpĕ, pencil
penthul, pencil
tärtĕ, carpet
tĭppĭ, whistle
mittĭ, whistle
tŭbba, shovel
tubda, shovel
domty, donkey
tĭ ĕn, chicken
bōpten, broken
pitta, pillow
ătter, wrapper
domtĕ, blanket
bamptet, blanket
ĭttä, whistle
ŭbbŭ, rubber

There is not a single instance where an unaccented initial syllable is sounded, though few such words appear in the exercise. On the other hand, only twice is the initial accented syllable or word omitted and that appears in tăm tā tăna (I can play piano) and că bŭ (I can't button it), which is probably due to the fact that she does not use I and has not learned to say it.

The initially accented are classed with reference to the number of syllables sounded:

One out of two, 7.

tā, table
daw, drawer
bŭ, buttons
tŭ, shovel
bō, broken
tĭ, chicken
tĭ, Kitty

One out of three, 1.

bŭ, butterfly

Of these eight words, five were later given two syllables:

tā ŭ, table
bŭppa, buttons
tŭbda, shovel
bōpten, broken
tĭtten, chicken

Classification with reference to reaction to consonant sounds: m prefixed to initial b and w, in block—mbŏ, book—mboo, whistle—mwĭtte.

make house—mā ŏ
make saw—mā daw
monkey—mŭmty
milk—mĭ

Internal m.

Christmas tree—tĭ tē
help me to open the door—hĕ ō dō
Christmas tree—tĭta tē
help me—hĕ mē
jump—dump

Final m.

broom—boo
arm—är
come—tŭm
drum—dum

Initial b.

broom—boo
boy—bô
blue—boo
box—bŏ
board—bō
butterfly—bŭ
by-baby-by—by bā by
blocks—mbŏ
book—mboo
blanket—donkey
dongĕ
domtet
bantet
domtĕ
bamptet
buttons—bŭ
broken—bō
boy—boy
blocks—bŏ
back—bă
button dress—bŭ dĕ
bite—bī
bear—bă
broken neck—bō nĕ
bounce—bow
broken—bōpten
block—mbŏ
bend your arm—bĕ är
book—mboo
blow—dō—bō
bank—bam
big—bĭ
button it—bŭt ĭ
beads—bēthe (whispered)

Internal b.

table—tā ŭ
too big—too ĭ
table—tā
goodby—bī
ribbon—ĭdda
unbutton, umbuppa

No final b.

Initial p.

pencil—pĕ th (whispered)
paper—pāpŭ
pencil—pĕmpŭ
pick it up—pĭppa ŭ
pick that up—pĭ ă ŭ
Polly—mommy
pencil—pempĕ
penti
Polly,—Pŏ ĭ
pencil—pĕntŭ
pillow—pidda
pig—mĭ
pick it up—pĭ ŭ
put it back—pĭpĭ bă
picture—pĭta
pencil—penthul
put apron on Polly—pû ā on Pŏ
put things away—pû ĭ ā
goat bite pencil—gō bī pentŭ
I can play piano—tăm tā tăna
put it up—pĭpy ŭ
go to sleep, Polly—dō tē Pŏ
play piano, Polly—tā tăna Pŏ
paper—pāpy
pencil—pentul
pig—pĭ
pillow—pitta
petticoat—k k toat
peppitote
Polly's a good child—Pŏ doo tī
plate—tate
pan—pan
put on?—pûp ä?

Internal p.

help me—hĕ mē
help me to open the door—hĕ ō dō
apron—āton, apon
walk up stairs—wa ŭ tă
carpet—tărtĕ
teapot—mēmŏ—tēpŏ
wrapper—ătter

Final p.

sheep—teep
up—ŭ
jump—dump
stand up—tä ŭ—tä dŏ
sleep—tē

Initial w.

wagon—wăthŭ (whispered)
window—mĭma
wagon—măwŭ
whistle—mwĭttĕ
walk—wa
whistle—tĭppĭ—mĭttĭ
wrapper—ătter
wake—wā
one—tŭ

Internal w.

sweep—nthwee
flower—power
drawer—daw
put things away—pû ĭ ā
gown—dow
nightgown—nīnŏm

Final w.

cow—tow
now—now

Initial y.

Yetta—Ĕ a
yellow—mĕmma
yes—mĕ

Final y.

boy—bô

Initial t.

table—tā ŭ
too big—too ĭ
two—two
three—tö
tag—tă
table—tā
tree—tē
tail—tā
take—tā
teddy bear—tĕ bă
teapot—tē pŏ
tie it now—tie ĭ now

Internal t.

stick—tĭ
Ethel—Ătĕ
Yetta—Ĕ a
butterfly—bŭ
buttons—bŭ
stockings—tŏ ĭ
Christmas tree—tĭtta tē
help me to open the door—hĕ ō dō
dress put on Polly—dĕ pû on Pŏ
get it for me—dĕ tĭt to mē
go to sleep, Susie—dō tē, Tudy
go to sleep—dō tē
pick it up—pĭ ŭ
put it back—pipi bă
picture—pĭta
Ethel—Ăta
whistle—mwĭttĕ
put things away—pû ĭ ā
button dress—bŭ dĕ
I can't button it—că bŭ
take it off—tā ŏ
goat bite pencil—dō bī pentŭ
put it up—pĭpy ŭ
stand up—tă ŭ—tă dŏ
walk up stairs—wa ŭ tă
Kitty—tĭ
button it—bŭt ĭ
tie it now—tie ĭ now
whistle—ĭtta
Santa Claus—Tăn Tă
nightgown—nīdow
unbutton—umbuppa
whistle—tĭppĭ—mĭttĭ
string—ting

Final t.

all right—a wī
pick that up—pĭ ă ŭ
blanket—donkey dongĕ
goat—dō
blanket—domtet bantet
put—pŭ
foot—toot
elephant—ĕmbĕ
pot—pŏ
blanket—domtĕ bamptet
plate—tate
got—dŏ
petticoat—k k toat peppitote
nightgown—nīdow
carpet—tärtĕ

Initial d.

doll—daw
donkey—dŏmthĕ
desk—dĕ
door—doo
dress—dĕ
drawer—daw
dōn't—dō
donkey—domty
dog—dŏ
drum—dum

Internal d.

window—mĭma
handkerchief—ămker
goodby—bī
teddy—tĕ
handkerchief—hamtit

Final d.

red—wĕ
board—bō
good—goo
stand—tă
bend—bĕ
good child—doo tī

Initial n.

now—nä
nail—nā
neck—nĕ
nightgown—nī dow

Internal n.

pencil—pĕ th (whispered)
pempŭ
pentŭ
pentĭ
penthŭl
lines—mlī
donkey—domthĕ
domty
morning—mô
window—mĭma
blanket—dongĕ
domtet
domtĕ
bantet
bamptet
handkerchief—amker
buttons—bŭ
don't—dō
monkey—mumty
elephant—ĕmbĕ
broken neck—bō nĕ
bounce—bow
stand up—tä ŭ—tä dŏ
I can play piano—tăm tā tăna
bend—bĕ
Santa Claus—Tăn Tä
tie it now—tie ĭ now

Final n.

one—tŭ
green—dē
wagon—măm̆ŭ
broken—bō
chicken—titten
open—ō
chicken—tĭ
apron—ăton—apon
button—bŭ
broken—bō
can—tam
chicken—tĭ ĕn
run—wun
broken—bōpten
on—on
unbutton—umbuppa
nightgown—nīdow
frying pan—tī pan
big one—bĭ one
nightgown—nŏmdī
nīnŏm
put on?—pûp ä?
button it—but it

Initial l.

lines—mlī
Lizzie—Lilly
look—oo
lion—līda
Lizzie—Lĕttĭ
look—loo

Internal l.

ruler—mŭma
flower—power
Elisabeth—Mĭma
yellow—mĕma
blue—boo
Polly—Mommy
Pŏ ĭ—Pŏ
butterfly—bŭ
glass—dă
blocks—mbŏ
go to sleep—dō tē
blanket—dŏngĕ
domtet
domtĕ
bantĕt
bamptet
help me—hĕ mē
help me to open the door—hĕ ō
dō
pillow—pĭdda
gloves—dub
play—tā
walk—wa
I like milk—dhī mĭ
pillow—pĭtta
block—mbŏ
child—tī
plate—tate
blow—dō—bō
Santa Claus—Tăn Tä
elephant—ĕmbĕ

Final l.

all—a
you'll—you
Ethel—Ätĕ
pencil—pempa—pentĭ—pentŭ—penthu
girl—mŭ—dŭ
doll—daw
table—tā
shovel—tŭ—tŭbda
nail—nā
whistle—mwĭttĕ—ĭtta
hole—ō
tail—tā

Initial s.

stick—tĭ
saw—daw
Susie—Mumĭ
Tudy
sleep—tē
stockings—tŏ ĭ
string—ting
Santa Claus—Tăn Tä
saucer—tauter

Internal s.

pencil—pĕmpŭ
pempĕ
pentĭ
pentŭ
pentul
Gracie—Gwaty
desk—dĕ
Christmas—tĭtta
whistle—itta

Final s.

horse—ort—ô
house—ŏ
grass—dă
blocks—bŏ
dress—dĕ
horse—hort—hor
house—ou

Internal z.

Lizzie—Lilly—Lettĭ
Elisabeth—Mĭma
Susie—Mumĭ—Tudy

Final z.

beads—bēthe (whispered)
lines—lī
shoes—too
buttons—bŭ
stockings—tŏ ĭ
gloves—dub
Santa Claus—Tăn Tä

Initial sh.

shoes—too
shovel—tŭ—tubba—tubda

Initial r.

right—wī
red—wĕ
rake—mā—date
ribbon—ĭdda
run—wŭn
wrapper—ătter

Internal r.

broom—boo
three—tö
board—bō
Georgie—Dordie
Gracie—Gwāty
girl—mŭ
good morning—goo' mor'
dress—dĕ
handkerchief—ămker
Christmas tree—tĭ tē
horse—or
broken—bō
tree—tē
girl—dŭ
grass—dă
horse—hort
apron—aton—apon
put apron on Polly, pû ā on Pŏ

stairs—tă
string—ting
carpet—tärtĕ
broken—bōpten

bend your arm—bĕ är
handkerchief—hamtit
frying pan—tī pan

Final r.

paper—pāpŭ
four—tōa
eraser—ŭbbŭ
ruler—mūma
flower—power
chair—mnă—thă—tă

door—dō
drawer—daw
bear—bă
for—tô
paper—papy
saucer—tauter

Initial f.

four—tōa
five—tī
flower—power

foot—toot
for—tô
frying pan—tī pan

Internal f.

butterfly—bŭ

Final f.

handkerchief—amker
take it off—tā ô

dress off—dĕ tô
handkerchief—hamtit

Initial v.

None

Internal v.

shovel—tŭ
gloves—dub

shovel—tubba
tŭbda

Final v.

five—tī

give—dĭ

Initial th.

three—tö
that—ă

things—ĭ

Internal th.

Ethel—Ătĕ—Ăta

Final th.

Elisabeth—Mĭma

Initial y.

Yetta—Ĕ a
yellow—mĕmma

yes—mĕ

Final y.

boy—bô

Initial j.

jump—dump

Georgie—Dordie

Initial ch.

chair—mnă—thă—tă
chicken—tĭtten—tĭ—tĭĕn

child—tī

Internal ch.

picture—pĭta
handkerchief—hamtit

Initial k.

cow—mtow
Christmas—tĭta
cow—tow
can't button it—că bŭ
can—tam
carpet—tärtĕ
kitty—tĭ

Internal k.

pick it up—pĭppa ŭ
donkey—domthĕ
blanket—dongĕ
domtet
domtĕ
bantet
bamtet
handkerchief—amker
stockings—tŏ ĭ
broken—bō
chicken—titten—tĭ
picture—pĭta
monkey—mumty
donkey—domty
chicken—tĭ ĕn
broken—bōpten
petticoat—k k toat—peppitote
handkerchief—hamtit
Santa Claus—Tăn Tä

Final k.

stick—tĭ
box—bŏ
look—oo
make—mā
pick—pĭ
book (whispered)
desk—dĕ
blocks—bŏ
book—boo
wāke—wā
rāke—mā
tāke—tā
băck—bă
neck—nĕ
walk—wa
I like milk—dhī mĭ
rake—date
block—mbŏ
bank—bam
look—loo

Initial g.

going—dä
give—dĭ
Gracie—Gwāty
grass—dă
green—dē
girl—mŭ
goo' mor(ning)
glass—dă
goat—dō
girl—dŭ
go to sleep—dō tē
goodby—bī
gloves—dub
go—dō
get—dĕ
good—doo
got—dot
gown—dow

Internal g.

wagon—wathu (whispered)
mămo

Final g.

too big—too ĭ
hog—hô
pig—mĭ—pĭ
dog—dô

Final ng.

string—ting

SUMMARY OF REACTIONS TO CONSONANT SOUNDS:

	Initial out of	error	Internal out of	error	Final out of	error
M.—	4– 4		2– 5	(omission)	2– 4	(omitted)
B.—	28–28		1– 7	" & d substit.	None	
P.—	32–32		2– 7	" & t substit.	2– 5	(omission)
W.—	3– 8	(omis., m & t)	2– 6	"	2– 2	
T.—	12–12		5–34	" or made initial	4–15	"
D.—	10–10		0– 5	"	0– 6	"
N.—	4– 4		6–18	" & m	6–22	" & m
L.—	5– 6	"	0–25	" d & t	0–12	"
S.—	0– 8	t	0– 5	" & t	0– 7	"
R.—	0– 6	" w, m, d	3–25	"	2–12	"
F.—	0– 6	t, p	0– 1	"	0– 4	"
V.—	None		0– 3	" & b	0– 2	"
Th.—	0– 3	" & t	0– 1	t	0– 1	"
Y.—	0– 3	m	None		0– 1	"
J.—	0– 2	d	None		None	
Ch.—	0– 3	t, n	0– 2	t	None	
K.—	1– 7	t	1–15	" & t	0–20	"
G.—	2–19	d	0– 2	"	0– 4	"

	Initial	Internal	Final
Labials—m, b, p, w,	67–72	7– 25	6–11
Linguals—t, d, n, l, r,	" 31–32	" 14–107	" 12–67
Gutturals—k, g,	" 3–26	" 1– 17	0–24
Correct—Labials—	" 93%	" 28%	" 55%
" —Linguals—	" 97%	" 13%	" 18%
" —Gutturals—	" 11%	" 6%	" 0%

LABIALS

Initial	m	was given	m	4	times	or all
Internal	m	"	"	0	3	"
"	m	"	"	m	2	"
Final	m	"	"	0	2	"
"	m	"	"	m	2	"
Initial	b	"	"	b	25	"
"	b	"	"	m	4	"
"	b	"	"	d	5	"
Internal	b	"	"	0	3	"
"	b	"	"	d	1	"
"	b	"	"	b	2	"
Initial	p	"	"	p	24	"
"	p	"	"	m	2	"
"	p	"	"	t	3	" (progressive assim.)
"	p	"	"	k	1	" (regressive assim.)
Internal	p	"	"	0	3	"
"	p	"	"	t	3	"
"	p	"	"	p	2	"
"	p	"	"	m	1	"
Final	p	"	"	p	2	"
"	p	"	"	0	3	"
Initial	w	"	"	m	4	"
"	w	"	"	t	2	"
"	w	"	"	w	3	"
Internal	w	"	"	0	2	"
"	w	"	"	w	4	"
Final	w	"	"	w	2	"

LINGUALS

Initial	t	was given	t	12	times	
Internal	t	"	"	0	18	"	
"	t	"	"	t	14	"	
"	t	"	"	p	4	"	(3, progressive assim.)
Final	t	"	"	0	11	"	
"	t	"	"	t	7	"	
Initial	d	"	"	d	10	"	
Internal	d	"	"	0	5	"	
Final	d	"	"	0	6	"	
Initial	n	"	"	n	4	"	
Internal	n	"	"	0	9	"	
"	n	"	"	m	10	"	
"	n	"	"	n	9	"	
Final	n	"	"	0	12	"	
"	n	"	"	m	2	"	
"	n	"	"	n	9	"	
Initial	l	"	"	m	1	"	
"	l	"	"	0	1	"	
"	l	"	"	l	4	"	
Internal	l	"	"	0	22	"	
"	l	"	"	m	5	"	
"	l	"	"	d	1	"	
"	l	"	"	t	1	"	
Final	l	"	"	0	18	"	
Initial	r	"	"	0	2	"	
"	r	"	"	m	1	"	
"	r	"	"	d	1	"	
"	r	"	"	w	3	"	
Internal	r	"	"	0	18	"	
"	r	"	"	r	7	"	
Final	r	"	"	0	12	"	
"	r	"	"	r	2	"	

GUTTURALS

Initial	k	was given	mt	1	times	
"	k	"	"	t	5	"	
"	k	"	"	k	1	"	
Internal	k	"	"	0	5	"	
"	k	"	"	p	1	"	(progressive assim.)
"	k	"	"	th	1	"	
"	k	"	"	g	1	"	
"	k	"	"	t	11	"	
Final	k	"	"	0	19	"	
"	k	"	"	t	1	"	
Initial	g	"	"	m	1	"	
"	g	"	"	d	15	"	
"	g	"	"	0	1	"	
Internal	g	"	"	th	1	"	
"	g	"	"	m	1	"	
Final	g	"	"	0	4	"	
"	ng	"	"	ng	1	"	

Consonants correctly sounded:

M.

mŭmty, monkey
tŭm, come
dŭm, drum
dŭmp, jump
mĭ, milk
môr, morning
mē

B.

bĭ, big
bĕ, bend
bă, bear, back, black
băm, bank
bămtet, blanket
bŏ, box, block, bounce
bŭ, button
book
bū, blue, broom
bē, beads
bī, good-by
bō, broken, board, blow
umbŭppa, unbutton

P.

pĭ, pig, pick
pĭdda, pillow
pĭtta, picture
pĕmpa, pencil
pĕppytote, petticoat
păn
apon, apron
Pŏ, Polly
pûp, put
păpŭ, paper
teep, sheep
dump, jump

D.

dĕ, desk, dress
dŏ, dog, doll, drawer
dŏmthĕ, donkey
dō, don't

T.

tĭ, stick
tĕ, teddy
tă, tag, stairs, stand
tŏ ĭ, stocking
tē, tree, sleep
tē pŏ, teapot
tā, table, tail, take
too
toot, foot
dot, got
bamtet, blanket
tate, plate
pitta, picture

N.

nĕ, neck
nŏ, now
nā, nail
nīdow, nightgown
bopten, broken
tĭĕn, chicken
wŭn, run

W.

wa, walk
power, flower
wā, wake

K.

amker, handkerchief

G.

goo' mor', good morning
Gwaty, Gracie

Ng.

ting, string

Mp.

dump, jump

Final consonants enunciated.

t. (8, right; 3, wrong.)

domtet, bamptet, bantet } blanket
dot, got
peppitote, petticoat
date, rake
toot, foot
but it, button it
tate, plate
hamtit, handkerchief
ort, horse

p. (2, right.)

teep, sheep
dump, jump

b. (1, wrong.)

dub, gloves

n. (7, right.)

bōpten, broken
bĭ one, big one
tiĕn, chicken
on
wun, run
tī pan, frying pan
apon, apron

m. (2, right; 3, wrong.)

bămˌ bank
nīnŏm, nightgown
tămˌ can
tŭm, come
dŭm, drum

ng. (1, right.)

ting, string

Vowel sounds enunciated. (All fairly correct.)

ĭ, 59 times	ā, 25 times	ä, 16 times	ow, 9 times
ŭ, 44 "	ē, 22 "	oo, 16 "	or, 6 "
ĕ, 39 "	ō, 18 "	ô, 13 "	a(ô), 7 "
ă, 28 "	a(ŭ), 17 "	o(ŭ), 12 "	
ŏ, 24 "	ī, 14 "		

Misplaced Consonant Sounds:

t for sh in shovel, tubba, tubda; sheep, teep
" " f " foot, toot; for, tor; handkerchief, hamtit
" " s " pencil, penti; saucer, tauter; horse, hort
" " sl " sleep, teep
" " pl " play, tay; plate, tate
" " p " piano, tana; put, pup; apron, aton; wrapper, atter
" " k " can, tan; blanket, bantet; Christmas, tita; donkey, domty; monkey, mumty; kitty, tĭ; carpet, tartĕ; petticoat, peppitote; chicken, titten
" " l " pillow, pitta
" " str " string, ting
" " wh " whistle, titta
" " ch " chicken, tien; child, ti; handkerchief, amtit
" " fr " frying pan, tī pan
" " p " wrapper, atter
" " st " stand, ta
" " z " Lizzie, Letti
d " bl " blanket, donge; blow, do
" " b " ribbon, idda
" " j " jump, dump
" " g " go, do; got, dot
" " r " rake, date
" " dr " drum, dum
m " t " teapot, memo
" " n " blanket, bamtet; donkey, domty; unbutton, umbuppa; can, cam; bank, bam; nightgown, ninom
" " wh " whistle, mitti
" " w " window, mimo
" " d " window, mimo
th " s " pencil, penthul
w " r " run, wun
b " v " shovel, tubba

So that t has done duty for sh, f, s, sl, pl, p, k, l, str, wh, ch, fr, p, st, z; d for bl, b, j, g, r, dr; m for t, n, wh, w, d; th for s; w for r; and b for v.

Classification according to phonetic lapses:

Progressive assimilation:—pĕmpŭ, pencil; Mĭma, window, Elisabeth; Mūmĭ, Susie; Mommy, Polly; măm̆ŭ, wagon; nä dä dĭ oo tă (the vowels of first two syllables) now going give you tag; with substitution—tĭtten, chicken; pĭpĭ bă, put it back; tĭppĭ, mĭttĭ, whistle; mēmŏ, teapot; nĭnŏm, nightgown; with omission—tărtĕ, carpet; tăm tā tăna, I can play piano (c as t set off the action).

Regressive assimilation:—in first impulse, with metathesis in second and third, kĕkĕtoat, petticoat.

Metathesis:—līda, lion; nŏmdī, nightgown; with omission—Ätĕ, Ethel.

Omission:—tā ŭ, table; too ĭ, too big; tē, tree; boo, blue; tĭ, stick; pāpŭ, paper; nā, nail; bô, boy; bô, box; oū oo, you'll look; mă, make; pĭ ă ŭ, pick that up; Ĕa, Yetta; ô, horse; dŏ, doll; bŭ, butterfly; tä ŭ, tä dŏ, stand up; bŭ, button; pĭta, picture; goo' mor', good morning; pu, put; dĕ, dress, desk; apon, apron; gă, gas; tā, table, tail; bŏ, blocks; Pŏ ĭ, Polly; boo, book; wa ŭ tă, walk up stairs; dō, door; teapŏ, teapot; gō, goat; daw, drawer; wā ŭ, wake up; mĭ, milk; hĕ mē, help me; bī, bite; tŏ ĭ, stockings; bŭ dĕ, button dress; hŏ, hog; bō, broken; nĕ, neck; hŏ, house; hĕ ō dō, help me to open the door; bĭ, goodby; tĕ bă, teddy bear.

Substitution:—bēthe, beads; Dordie, Georgie; daw, saw; tum, come; Gwaty, Gracie; power, flower; mĕma, yellow; tow, cow; dŏmthĕ, donkey; Tudy, Susie, dō, go; teep, sheep; mā ŏ, make house; pĭ ă ŭ, pick that up; aton, apron; toot, foot; too, shoe; dump, jump; tam, can; tā, play; dō tē, go to sleep; ting, string; dāte, rake; wun, run; pĭtta, picture; hamtit, handkerchief; tauter, saucer; dot, got.

Omission and substitution:—pĕthĕ, pencil; thwee, sweep; wăthŭ, wagon; wĕ, red; ort, horse; nä dä dĭ oo tă, now going give you tag; a wī, Lilly, all right, Lizzie; Äta, Ethel; dă, grass, glass; dē, green; tī pan, frying pan; mnă, chair; tĭ, kitty; mŭ, girl; dŭ, girl; mĕ, yes; ătter, wrapper; too, shoes; Tăn Tä, Santa Claus; thă, chair; tă, chair; pĕntĭ, pencil; aton, apron; tē, sleep; nīdow, nightgown; donkĕ, domtet, bantet, blanket; amker, handkerchief; dub, gloves; tĭ tē, Christmas tree; tŭ, tŭbda, shovel; ĭdda, ribbon; dō, goat; tô, for; mā, rake; tĭ, chicken; bōpten, broken; ĕmbĕ, elephant; dō tē, go to sleep; wĭttĕ, whistle.

F. L. Wells in a monograph on "Linguistic Lapses" calls attention to the fact that a lapse is the involuntary modification

of any linguistic sensation or movement; that the process itself is always central, no matter what its source of excitation; that theoretically such modifications might take an infinity of forms, but in practice nearly all may be referred to the types of assimilation, dissimilation, omission, substitution and metathesis, the second named being practically confined to the sensory processes; that lapses are not only involuntary, they are for the most part also unconscious, *i. e.*, there is no awareness of them until their primary memory has been lost. For this reason the subjective content of the mutilated complex does not differ, in motor lapses, from the content of the unmutilated one, for the simple reason that the higher centres are not aware of the mutilation, and thus the lack of lapse appreciation is hardly of essential significance.

He thinks the most probable explanation of metathesis lies in the physical mechanism of co-ordination. The easier movement is anticipated simply because it travels over the synapses faster. One instance in the case under inspection disagrees with the view that the easier movement is the one anticipated. In kĕ kĕ toat (petticoat) metathesis occurs in the second and third syllables; k is among the most difficult letters, and she has succeeded in sounding it in only two other words, but it is anticipated in the first syllable of this word and substituted for p. This really brings the influence of the k from the third to the first syllable.

The substitution is a product of the same general processes as the assimilation, the distinction being merely that in the assimilation the effectively associated element is taken from an immediate body of linguistic elements, and is so taken principally, if not solely, on account of its spatial or temporal contiguity with the assimilated element or complex. In substitution the lapse is less directly dependent upon physical conditions, and more upon the higher principles of association, as similarity, contrast, etc. In the expression tā tăna, Pŏ (play piano, Polly) is found almost the only failure of the initial p; and that is due to association with the expression tăm tā tăna (I can play piano) which preceded it immediately in the same lesson.

A. M. Bell in his "Science of Speech" designates articulative defects as the substitution of one organ for another, or of one mode of organic action for another, and names these as the most common:

1. Guttural instead of lingual vibration of r.
2. Divided, instead of centre, emission for hissing sounds, as th for s.

3. Point, instead of back, shut positions, as t for k.
4. Non-vocal, instead of vocal, formations, or vice versa.
5. Nasal instead of oral emission.
6. Obstructed nasality, etc.

He further gives as a principle of organic action that a consonant consists of two parts, a position and an action; the position, one of conjunction—the action, one of separation; and both are necessary to perfect articulation. This principle is particularly applicable in this case to the passive formation of m, b and p. (2), (3) and (4) are the prevalent defects.

Conradi, in a dissertation on the "Psychology and Pathology of Speech Development of the Child," has brought together numerous observations and the interpretations that different workers in the field have made of the language development of the child both normal and abnormal.

The vocal language of the child probably begins with the first cry after birth. Crying forcibly expels the air from the lungs, produces deep inhalations as they could not be produced in any other way and thus develops the whole respiratory system. It is even a rudimentary language itself since a skillful nurse can interpret the needs and moods of the child by its cry. It has, moreover, been graphically shown that the muscle innervation of the respiratory system, developed during the early cry period, is the same as that used in ordinary speech.

During the early babble period the child plays with its vocal and articulatory organs and makes new sounds for the pleasure they give him; the activity of the speech-producing organs is automatic, just as is that of the legs and arms. A great number of sounds are produced which are not found in our language, some of them so complicated that we cannot produce them; among these are the so-called vomitive sounds and the cluck-like sounds, found among some primitive peoples but not in our language. Dr. Hall says, "It would be difficult even with Bell's phonic notation, or with a phonograph, to classify the first vocalizations of an infant." Preyer thinks that all sounds necessary for future language are now produced, whereas Ament thinks the number of possible sounds is infinite, and that it is only with difficulty that the child sinks from this wealth of sounds to the meager level of his mother tongue. Gutzmann is still more conservative than Preyer: he says the sounds developed during this period are labials and dentals, *i. e.*, the sounds produced in the first and second articulatory systems. Wundt says the tendency to utter such a great variety of sounds has been inherited physiologically through a long series of speech-using ancestors, that soon after

birth association tracts begin to develop which make articulation possible, and adds that with sufficient data collected from the early la-la period it might be proved that, due to hereditary causes, the early sounds of children vary somewhat with nationality. As a suggestive illustration he quotes sounds uttered from the twelfth to the fourteenth week as recorded by Preyer and by K. C. Moore. *German:* am, ma, ör, rö, ar, ra, hu, na, om, in, ab, la, ho, mö, nä, na, an, mg, mb, gr, ha, bu, me, nt. *English:* eng, gr-r-r, bo-wo, ang, diddle, ing, bow-wow, th, udn, pop-pä-pä-bä, udu, bob-bä, um-go, good, momä.

The order of development of the different sounds in the child as recorded by different observers shows some general agreement though there are variations in detail. According to Schultze's principle of least effort the vowels ought to develop in the following order, ä, a, u, o, e, i, ö, ü; and the consonants thus: (1) p, b, m, f, w, d, n; (2) l, s; (3) ch. j; (4) sch; (5) r; (6) ng, k, g. Preyer does not agree with this; he says he observed the vowels to appear in this order: u, ä, a, ö, o, ai, ao, i, e, ü, oeu (French), au, oi. He thinks that the sounds do not develop in the same order in all individuals and that the order of development is certainly not due to the influence of heredity. The consonants he observed in the following order: m, g, r, t, h, b, l, n, k, j, d, p, w, s, z, f, q, x. He suggests that some of these sounds were undoubtedly uttered sooner but that he failed to observe them.

Sigismund gives the following order: (1) vowels; a, ä, u, ei, o, i. He says ö, ü, and äu are not spoken purely by children. (2) Consonants; b, m, n, d, s, g, w; f, ch, k are learned with some difficulty, and l, sch, and r, are the last to be spoken correctly. Löbisch gives the following order: m, b, p, am, ma, ba, pa (but not ab), d, t, l, n, f, s, ch, g, k. Vierordt gives this order during the third and fourth months: mam, ämma, fu, pfu, ess, äng, angka, acha, erra, hab. Preyer did not hear pf and ss so early and doubts whether f can be pronounced distinctly owing to lack of teeth. Gutzmann has heard pf so early but the f was not pronounced as an adult would pronounce it. Tracy examined seven hundred cases of mispronunciation and on the basis of this investigation arranges the following order of difficulty: b, p, m, h, a, w, o, k, d, q, n, t, f, e, j, s, ch, g, y, sh, v, th, l, r. He found what per cent the number of mispronunciations of a letter was of the total number of times the letter was found in the child's vocabulary.

Oltuszewski has observed the order of the consonants as follows: b, m, p, t, n, d, l, c, dz, ch, k, j, s, z, f, w, g, z, r, t, sz, z, cz. That f, w, l, appear much earlier with Preyer's child, he thinks, may be because there are more words in

German that begin with those letters, or that they appeared simply temporarily as transitory noises. His observations, he says, contradict Preyer's statement that all sounds used in later language develop so early, but that they confirm the physiological principle of Thausing's natural system of classification. Thausing, namely, holds that beginning with *a* all simple sounds are formed by deadening the sound of *a* seven stages in three directions. His system is arranged in the form of an inverted cone as follows: m, b, p, f, w, u, o, A, e, i, j, ch, k, g, y; then from A he drops this series at right angles, l, r, s, ss, t, d, n. The three letters equally distant from A have similar relations to A. Oltuszewski says, if we begin with *a* and narrow the vocal cavity forward we get o, u, and all the consonants of Thausing's labial and dental series, but if we narrow the vocal cavity backward we get i, e, and the consonants k, g, ch, j. He then constructs a system similar to Thausing's but leans the dental series obliquely toward the labial series and adds to the former the Polish z-compounds not found in German or English.

From the above we see that some letters generally appear early and others late; what is the cause of this? Schultzè explains the order of development by the following law: The sounds appear in a series which proceeds gradually from those which are made with the least to those which require the greatest physiological effort. He adds, however, in a foot note that this series need not necessarily be the same with all peoples and all races, nor even with all families, owing to the influence of heredity. This he offers as an explanation for the fact that Preyer's observations do not verify this law.

Gutzmann supports this law in the main but holds that there are manifold individual variations. He agrees to Preyer's objection that the degree of physiological effort cannot be measured, but says that the study of stammering children leads one to believe in the law. He points out that the muscle action in the three articulatory systems, lips, tongue and teeth, and palate increases in difficulty in the order given. And, moreover, that those sounds which are the easiest for the child are most often repeated and are thus fixed in the motor speech memory, therefore they are more readily used when learning to speak. These difficulties, he says, cannot be measured in a scientific way, but they can be noted in a general way by observing the muscle action. In speaking of the difficulty in the third articulatory system, he says: Evidently the muscle sense is less developed in the rear of the mouth than in the fore part. People can readily move their lips and the tip of their tongue into any desired position, but not so with

the body of the tongue; and their muscle sense fails completely when they try to move their soft palate without uttering a vocal. Franke thinks the law is valid in the main during the period of voluntary imitation and decidedly valid in the combination of sounds.

Dr. Hall says: The child's linguistic development does not proceed from the easy to the hard, according to any adult standard, but the hard, and often the very hard, may precede the very easy. Rzesnitzek says Schultze's law cannot be accepted as a fact since by the law of senso-motor association difficult sounds may come early. Some sounds which the child makes playfully give it pleasure and it repeats them. When thus the attention is drawn toward the sounds the intensity of the sensation is increased, and this in turn sets free an increased amount of energy of the motor centers. If Schultze's theory were true, he says, it ought to hold in the instruction of deaf mutes, which it does not since some produce difficult sounds early, and moreover, all pupils would have to make the same progress, which they do not. However, he admits that labials and linguals are physiologically easier and adduces as proof that many primitive people have hardly any other sounds. Ament also thinks that a categorical statement like that of Schultze is not tenable. He says: The orderly succession of the sounds is for the time being a secret which can only be solved by exact phonetic investigations in the future. He supports the following principle: The labials and dentals occur oftener than the gutturals among the first sounds of the child because they have a physiological preference. Ma, ba, pa, are first because the organs that produce them are active in feeding. Moreover those animals that swallow their food without chewing and thus have a vigorous palate often cry with gutturals. Among birds, for instance, the cock crows "kikeriki," the hen says "gagag," the cuckoo "kuku," the raven "krahkrah." Those animals, on the other hand, that seize their food and chew it before swallowing often use labials in forming their cries. Among mammals, for instance, the dog says "wau wau," the sheep "bäh, mah," the cow "muh," the cat "miau," etc.

Schultze, Preyer, Sigismund, Gutzmann and others ascribe the early appearance of labials and dentals partly to the preparation the child gets through the sucking movements while nursing. Preyer furthermore says: The position of the human foetus is such that long before birth the hands easily may touch the lips, and that the swallowing of the nourishment causes it to flow over the edges of the lips and the tongue thus causing repeated excitement of the nerve endings of those

organs. He, however, holds that the order of succession in which the sounds of speech are produced is different with different individuals, and consequently is not determined by the principle of least effort. It is dependent upon several factors—brain, teeth, size of the tongue, acuteness of hearing, motility, etc. Only in the later intentional sound formations and attempts at speaking does that principle come under consideration. Oltuszewski agrees with the above named authors as to the importance of the exercise the lips and the tongue get in sucking, and adds that the gutturals and labio-dentals appear so late on account of the complicated mechanism involved in producing them. Sully also thinks that Schultze goes too far with his principle of least effort. He says the very variability of this order in the case of different children, shows that there is no such simple correspondence as this.

It has been noticed by many observers that some sounds are made early and later forgotten. From the order in which the letters were learned we see that some sounds uniformly appear later than others. The letter s is used late and has a tendency to remain imperfect often for years. Deaf mutes especially have trouble with it; though they learn it early they must be corrected again and again, whereas r, a very difficult letter to learn, is not forgotten after the deaf mute child has once succeeded in pronouncing it. These facts Rzesnitzek takes as a basis for the following rule: "The stronger the motor sensations necessary to produce a sound the less danger there is that the sound will be forgotten after it is once learned." This principle, he thinks, explains Treitel's facts which he found in the Kindergartens of Berlin where out of 180 children examined, 3 to 6 years of age, 34.5% lisped.

It is not feasible to draw any conclusions as to the order of development of vowel sounds in the case in question, on account of the protracted babbling period before she was subjected to observation. The order of the consonants may safely be accepted as m, b, p, t, d, n, l, k, g; the first five being very well established, the remaining four varying in degree of certainty in the order named. Beginning with m as the only recognizable consonant sound (and that caused by the closing of the mouth and incidentally bringing the lips together), the other sounds have gradually emerged and freed themselves of the overshadowing m that at first preceded them, or introducd them as it were.

One of the most serious drawbacks to the overcoming of retardation in speech development is the fact that members of the family, and especially children and playmates, learn the language of the defective one and by responding thereto satisfy

the need which language supplies. This in turn prevents conscious effort at improvement (or a consciousness that improvement is necessary or desirable) as the result of lack of attention to details and so of comparison and discrimination. When others repeat or make use of the sounds and gestures of the defective language, they tend to fix it as a medium of communication.

Wells calls attention to the fact that the vast majority of assimilations and substitutions are recorded as lapses merely because of the transitory character of their exciting cause; when this is constantly present not only in the individual but in the entire linguistic community, its frequent occurrence gives the laws of imitation full play, the more so as it is probably an economizing process, tending to the elimination of inessential differences. The lapse then establishes itself in language or disappears according to the frequency of its occurrence and economic value; in a word, its naturalness.

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NURSERY BUGABOOS

By Elsie Clews Parsons, New York City

There are homes to-day where children are no longer frightened with ghost stories and where the devil is kept out of their circle of acquaintances until they meet him as a literary character or in Sunday school; but even in such nurseries the Old Witch and Santa Claus still hold their own, for precious fairy stories have to be read and Christmas properly celebrated. And we suspect that if Nurse knows she must forego the help of the old-fashioned bogyman she still threatens in time of stress to send for the policeman.

Outside of modern civilization this kind of nursery discipline is also in vogue. Although savage children are generally reputed less obstreperous than civilized, they, too, are sometimes scared into being quiet. In one of the folk tales of the Papuan peopled islands of the Torres Straits a mother and grandmother threaten a fractious girl with the Dògai if she will not stop crying. Failing to heed them, this female bogy does carry her off and torture her. In fact bad children in these islands may expect to be visited at any time by a Dògai. Fijian children are terrified into quietness by "grim, immodest representations of the human figure, about eighteen inches long," a sad kind of doll. Samoans have a juvenile scare-crow in Sina ai Mata or Sina the Eye-Eater, a bird-god. "Do not make such a noise; Sina the Eye-Eater will come and pick out your eyes," a harrassed parent would say. Thompson River and Kootenay Indian parents also threaten noisy children with a bird. "The Owl will come and take you," or "I'll give you to the Owl," they say, and Thompson River big people themselves believe that once the Owl really did carry off the child of a chief of the Bear Clan of the Nisk'a'. The chief's son was a cry-baby and one day his father became impatient and sent him out of doors, saying, "The White Owl shall fetch you." The boy went out with his sister, but Owl seems to have made a mistake, for it was the girl he carried off—to make her his bride.

Victorian children are also taught to be afraid of the Owl and whenever they hear its hoot they crawl under their grass-mats. An Owl-man is a night terror to naughty children among the Ponka Indians. A Pueblo Indian friend has told me when she and her brothers were naughty her parents would threaten to send for Owl and Coyote. We remember that Hiawatha's grand-parent

> "Stilled his fretful wail by saying,
> Hush! the naked bear will get thee!"

Galla and Caffre parents have helpful stories of a supernatural lion and of other fabulous monsters. Important among them is one Tickolosche, a creature, according to Caffre mothers, in the habit of pulling children outdoors and taking them far away in the veld.

Peasant mothers, like savage, rely on supernatural aid. In Switzerland misbehaving children are threatened with one Wauwau and with Sträggele, a giantess; in Epirus with the classical Lamia, a wild and

very dangerous creature; at Röttingen with the Berch, a Thing with enormous mouth and belly; in Oldenburg with Bumann, a fellow who lurks in the dark. The Esthonians have a story of a spoiled boy who one day having ridden his father's horse to death was the day after himself carried off into the depths of the sea by a strange horse who came up to him as he played on the beach. This sea horse is a terror to disobedient children. So no doubt are the fabulous animals of Germany — werwolves, the dogs of the Wild Huntsman, dragons of all kinds. The East Frisian mother whose little boy rebels against mittens tells him that *De Fingerbiter is buten,* "the Finger-biter is outside;" our own Jack Frost has probably been put again and again to like service. In Baden twilight dawdlers hear: "Go home, or the Nachtfrau will fetch you." Almost all over Germany the Sandman helps to get children to bed. Like so many Germans the Sandman is an American immigrant. I suspect that the "gobble-uns" of the Hoosier poet are also of foreign parentage.

"You better mind yer parents, and yer teachers fond and dear
An' churish them 'at loves you, an' dry the orphant's tear,
An' he'p the pore an' needy ones 'at clusters all about
Er the gobble-uns 'll git yer
Ef you
Don't
Watch
Out."

A "good" child doesn't cry. Nor, for the peace of his elders, must he be adventuresome. It is troublesome to look for children who run away. And so would-be explorers are threatened with supernatural mishap. The Euahlayi tribe of New South Wales has a bogy called from his cry Gineet Gineet. He goes about with a net across his shoulders into which he pops any children he can see. Among the Koita, a Melanesian tribe of New Guinea, the Vadavadas keep children from straying into the bush at night. A Vadavada is a man who travels only at night and who brings sickness and death to those he encounters. Chemosit is a Nandi devil, half man, half bird, with one leg, nine buttocks and a red mouth which shines at night like a lamp. He catches children who are foolish enough to be lured away from home by his night song. 'Nenaunir of the Masai is a kindred monster. He is an invulnerable, stony-bodied creature with the head of a beast of prey and feet with claws. "Don't go too far," a mother says to her children, "or 'Nenaunir will get you." Japanese boys believe that if they go swimming without permission they are liable to be drawn down under the current by the long arm of his Highness the Sea-Monkey. The Slavs of the Spreewald keep their children within bounds by saying: "Don't go there, Scerpel is there. He will cut off your head." Scerpel is a ghost with an alarmingly long head. In the Tyrol stray children are liable to be kidnapped by Stampa, a horse-headed spirit, Frigga modernized. In Brunswick there lives a Corn Woman who makes off with little children looking for flowers in the fields. Elsewhere in Germany children are kept away from pool and stream through fear of their enticing Nixe and Wasserweibe, and German woods and wilds are furnished with multitudinous witches and hobgoblins — a rich assortment of "Kinderschrecken."

Then there are "moral" stories for runaways. The Bunya-Bunya of Queensland have a story about two boys who were once left alone in camp with strict orders not to leave it until the elders returned. Nevertheless, tiring of the camp, the boys went down to the beach.

Then the Thugine or Great Serpent of the Rainbow, came out of the sea and, always on the watch for unprotected children, caught the boys and turned them into the two rocks that now stand between Double Island Point and Inskip Point. "Here you see," the old Blackfellow used to say to the boys, "the result of not paying attention to what you are told by your elders." On Rogea, an island off South East New Guinea, once lived a little girl, say the Melanesian natives, a little girl much given to wandering about. "At all times her mother and father they said, 'Don't wander, or else the sorceress in the bush will eat you.' The girl didn't listen, she walked about. The old woman saw the girl and called her and said, 'You come.' The sorceress took the girl to a cave and tattooed her. She boiled the blood and ate it. Then she said to the girl, 'You stay, I go and seek our food.' She lied to the girl, her idea was to go far searching, that she might eat her on the morrow. The girl ran home, and her father killed the sorceress."—"The Babes in the Wood" and "Hänzel and Gretchen" carry their moral with them. I suspect that the childlike mothers of Greece pointed out to their little girls that if Europa and Proserpina had *only* stayed at home . . . And no doubt our own primitive mothers are unfair enough to put even "Golden Locks" and "Little Red Riding Hood" to moral uses.

The folklorist could undoubtedly add to these stories of the misfortunes of runaway children; for primitive society is even more apt than civilized to snub the youthful explorer or inventor. In fact the story of the adventuresome lad who always begins by running away from home and always ends as a success, whether as sea-captain or cowboy, highwayman or merchant, is essentially modern.[1] Even Jack the Giant-Killer is comparatively modern. In its primitive version I suspect the Giant killed Jack and ate him up.

Like Jack's Giant and Hänzel's and Gretchen's Old Witch, savage bogies are apt to be cannibalistic. Muuruup of West Victoria was one of these epicures of child flesh. Troubled parents would threaten to send for an agent of his who lived in the moon. Once upon a time, in Pulu, an islet of the Torres Straits, the boys and girls used to disobey their parents and play a game of twirling around with outspread arms. They played every night on the beach, until finally a great rock fell from the sky and killed everybody on the island—except one indispensable couple. Parents still tell their children never to play this game at night, and the old men remind bad children that by and by, if they are not good, the Pulu Stone will come and eat them up. In one of the Zuñi summer dances there is a mask of an old woman, a ceremonial scold, and part of her "business" is to threaten to eat up the children. A katcina in a Hopi dance makes the same threat. Both Chemosit of the Nandi and 'Nenaunir of the Masai are addicted to devouring children. So is the Songòmby, a fleet-footed, ox-like bogy of the Bètsilio of Madagascar.

It is etiquette in Caffre families for older children to leave the hut when their elders begin to eat; but as elsewhere the younger hang around for a taste— until their father bids them go out into the veld to call Nomgogwana. If the youngsters object, Father says in an off-hand manner: "Very well, sit where you are; the food will not cook, as you know, till Nomgogwana comes, and then when he does come he will be so angry at seeing the food uncooked that he will

[1] As for the triumphant girl adventurer, she is altogether too modern for a place in literature as yet. The meaning of *adventuress* is still circumscribed, and girls who like stories of adventure have to read boys' books.

eat all the children he can find." Further admonition at the moment is naturally uncalled for, but if the children happen to return too soon for parental comfort, they are told that Nomgogwana has not come yet because they did not go far enough out on the veld to call him, that he did not hear, that the conditions were not right, the usual explanation of failure is summoning a spirit.

It is probable that the savage like the civilized nursery is particularly conservative, and so we wonder[2] if this marked tendency to cannibalism is an echo out of a remote past where cannibalism was not merely ritualistic as it is among almost all the savages of to-day.

In some cases the bogyman comes systematically to the help of parents. The Zuñi "scold" and the Hopi katcina, for example. Both are much dreaded by the children. The Hopi mask goes up to the child and says: "You are naughty and bad; we have come to get you. You fight the other children, kill chickens, etc., and we shall now take you away." The child naturally begins to cry and promises to be good. It is said that formerly the katcina would actually carry off a child; but that once a child died of fright,—hazing anywhere having an unlooked for outcome, and at times tragic.

In western Victoria the white kangaroo pouch masks worn over head and face by clowns at corroborees are often used to frighten misbehaving children.[3] Catholic children go to confession when they are seven years old. What impression, we wonder, does the unseen figure in the confessional make upon their imaginations? Even outside of the confessional, the black-garbed priest was once made an object of fear, according to Fénelon, to little French children. In parts of Germany a mask of St. Nicholas makes a preliminary visitation every year some evening early in December. He is dressed in fur, of course, and he carries a switch or rod. He threatens the naughty children, throws apples and nuts out of his bag to the good, and has all the children say a prayer. Our invisible Santa Claus who merely writes the names of good and bad children down in his books is a good-for-nothing fellow in comparison. In Germany, too, St. Nicholas has even a spring deputy, so to speak, in Easter Rabbit, that cunning little animal who forgets the bad children and brings his eggs only to the good.

Sinners as well as saints aid nursery discipline. To Roman children Attila was a bogyman; to Assyrian, Narses; to Moslem, Saracen, and Turkish, Richard Coeur de Lion and Matthias Corvinus; to Persian, Tamerlaine; and to children throughout Europe, Bonaparte. There were barrios in the Philippines where a child who cried was hushed with the exclamation "Castila!" I have no doubt that many a Spanish conquistador became a bogyman to American Indian children and that, already a bogyman to adults, our own Rough Rider in his ceremonial mask will serve for one some day to children.

The rôle of the bugaboo in the child's life has sometimes been questioned by the modern educator, that unquiet person who has begun to question everything — even the last two lines of "Now I lay me down to sleep." But without the help of bugaboos we ask in

[2] (And no more than wonder.)

[3] In modern life we sometimes get an amazing individual repetition of a savage custom. In the Benson family, writes one of its members, it was customary for an ape-like mask to bring the children their presents at Christmas and on birthdays. On one occasion one of the boys was greatly terrified by this "delightful" family custom. (Benson, A. C., *Where No Fear Was,* pp. 40-1. New York and London, 1914.)

turn whether children could be completely prepared for society, at least for many of its boundaries, sanctions, and goals. Thanks to Ravenous Monster or Old Witch, fear of the Unseen or Unknown takes the place in their mind of curiosity. Stories of the misfortunes of the wayward have set a value on obedience to authority and helped make potentially good subjects, wives, and worshipers. The fearful foreigner has helped develop the patriotism that identifies itself with bloodshed. Ghost stories or Christmas gifts have turned attention from the more to the less immediate reward, from the needs of every day to the promises of a life to come. Truly, so far as society appeals for its support to the spirit of apprehensiveness, of docility, of hatred, and of long-suffering, the nursery bugaboo is an assistant invaluable and indispensable. If we reject its services, let us be sure we realize what we forego.

HOW THE ENGLISH TEACH THE WAR

The London "Times Educational Supplement," January 5, 1915, has an article on American education and the war, in which it resents the charge that John Bull is an ostrich burying its head in the sand. It says that in America there are a few superintendents who have ordered their teachers to avoid discussing the horrors of war in the class-room, and occasionally not to refer to the war. One educational journal says children hear too much of the war outside and that grown-ups are tired of it and will not read the war news, but others feel it a supreme privilege to be a contemporary observer or to hold front seats at this spectacle of the ages and share its emotions. The "Times" goes on to quote approvingly the plea of the editor of the PEDAGOGICAL SEMINARY that the war affords a rare opportunity to broaden political and historical horizons, etc. Carl Schurz thought the strongest and cheapest of all coast defences consisted in "Fort Justice" and in "Forts Good Sense, Good Will, Self Respect" and if trouble arose, "Fort Arbitration." Our Commissioner Claxton thinks there is a great opportunity in the war for America to assume "the intellectual leadership of the world," and the "School Review" of Chicago says that American universities now have an opportunity to capture the "thousands of students who have been attending universities in Europe," as we are trying to capture the world trade.

A CIRCULAR ISSUED BY THE LONDON COUNTY COUNCIL ON THE TEACHING OF GEOGRAPHY AS AFFECTED BY THE EUROPEAN CRISIS

THE TEACHING OF GEOGRAPHY AS AFFECTED BY THE EUROPEAN CRISIS

In the teaching of Geography the military aspects of that Science will naturally occur to teachers at the present time. The general effects of physical conditions upon any campaign, and their political effects upon the present campaign. The mere elements of the former are easily appreciated by young people and once they have been pointed out they can be applied to the case of the wars now in progress. It must first be made clear how the whole effect of geographical conditions upon campaigns as distinguished from the effect of human handiwork resolves itself into two conceptions:

(1) The natural line of advance.
(2) The natural obstacle.

(1) An army is a number of men artificially concentrated on to a small space, needing therefore, accumulations of supply, and further dependent for its success upon rapidity of movement. It will therefore find natural lines of advance whereupon these conditions are combined.

They are commonly combined, in Europe at least, along the great river valleys where those river valleys lead from one territory into another, *i. e.,* from one belligerent centre to the centre of the enemy's force. Thus the Rhine, the Elbe, the Middle Vistula have never been lines of advance. But the Upper Dneiper (as in 1812), the Oise and the Marne and the Lower Valley of the Meuse and the Upper Valley of the Moselle have been constantly throughout history lines of advance.

It should be shown how a river valley providing (*a*) primitive communication by water, (*b*) water supply as well as communication, leads to a string of towns upon its course. These towns become convenient depots or places of accumulation upon which armies can depend for their stores, and are sometimes also *political objects* for armies, *i. e.,* places the capture of which will politically weaken the enemy: thus, advance down the Oise and the Marne is towards Paris, the capital of France, and the natural objective of an invader. Further, it should be pointed out how the river valley having thus created a string of towns along it creates a road uniting them; how dependent armies are upon roads: modern scientific advance has not appreciably diverged from these old lines, for the *railroads* naturally link up towns and naturally find their easiest ways down valleys, while the later *petrol* traffic, so important to modern war, will follow a main road.

Let it be noted how, in the present war, the German advance on France followed first the valley of the middle Meuse, and next the valley of the Oise, while the Austrian advance upon the Russian armies followed the valleys of the Upper Vistula.

In connection with the movement of armies also point out the importance of the great *Plains.* Thus the original German invasion of France is mainly directed across the *Belgian Plain,* shirks the difficult hill country of the Ardennes, avoids the Vosges, and neglects altogether the Swiss Hills to the south. In the same way the transference of troops from east to west across Germany from one point to the other, follows in the main the *Baltic Plain.*

The *great Plain of Poland* is the theatre of all the principal movements in the eastern campaign; the Carpathian mountains, on the other hand, interfere at once with the Russian advance into Hungary, and compel that advance to take place to the north of them and constrain the Austrian effort against Russia also to be to the north of their range.

(2) It should be pointed out how *obstacles* to the advance of an army largely determine a campaign. That an obstacle in a military sense is not something which an army cannot traverse, but which an army traverses with more difficulty than the country before and behind and on either side of it, and in one where a smaller number of men can hold up for a time a larger number of men. The obstacles to armed advance are, in order of their importance, the river, the range of hills, the forest, the marsh, and the desert. Armies are constrained to use, are checked by the enemy at, and march by roads necessary leading to *defiles,* that is, narrow and special opportunities of overcoming obstacles: *fords* over rivers, *passes* over hills, *clearings* or *gaps* through forests, *causeways* naturally formed by somewhat harder ground through marshes, and in *deserts* the isolated points where water may be found.

Examples of all these in the present campaign:

(1) The Rivers: The Middle Vistula and the Seine; the Lower Meuse, the Sambre, the Aisne; the extreme Upper Meuse. Probably later also the Rhine, the Elbe, and the Oder, all of which lie perpendicular to an invasion of Germany. Also the Suez Canal, the main barrier to advance upon Egypt.

(2) Hilly Country: The Ardennes, the Vosges, and the Carpathians.

(3) Forests: The Ardennes, the Argonne, and the Polish forests south of the Pilitza and West of the Vistula.

(4) Marsh: Only one considerable example, the lower part of the Pilitza. One small but very important example as affecting the issue

of this war, the marshes of the Yser, which baffled the German advance upon Calais.

(5) Desert has only appeared in the possibilities of a Turkish advance upon Egypt. In all these cases defiles are apparent.

Of natural defiles over rivers, that is of fords, few, but of passes over hills, the passes of the Vosges and of the Carpathians; of gaps through forests, the three roads through the Ardennes and the gap of Mons. Of causeways through marsh, the hard way in front of Nieuport over the Yser, and the causeway to Suwalki on the borders of Eastern Prussia; while of defiles in desert land the water supply of Nakhl, the Peninsula of Sinai, and the water supply of Bizra and Katich along the Mediterranean roads from Syria into Egypt.

Another aspect of the geographical condition of the war is that of *economic supply.* Let it be noted that England alone of the combatants cannot feed herself, but is dependent upon over-sea supply; Austria and Germany together can just feed themselves, so can France with the aid of North Africa, though with difficulty after the destruction of harvests in the north during this war, and the loss of part of the rest of the harvests through calling out the men. Russia can amply feed herself.

Modern munitions largely exotic to Europe. Note, further, how modern munitions are largely exotic to Europe, or, if found in Europe are found only in very restricted regions: *e. g.* Petrol, an absolute necessity; indiarubber and even many of the metals are now mainly provided by the New World or the Tropics; copper, an essential to artillery; tin.

Thus any blockade of the Germanic Powers tells heavily. Aluminium and certain nitrates of explosives. Coal, however, and iron the Germanic Allies have in abundance.

Note again the geographical conditions of the *centres of armament,* principally the neighborhood of coal and iron coupled with a fair distance from the front to protect such centres against immediate attack: *e. g.* in France, St. Etienne and Creusot. In Germany, Essen.

The opportunities of the enemy to obtain goods through neutral powers should be noted, notably Holland, Scandinavia, and Italy, and Switzerland.

Finally, of course, and especially in this connection, the effect of British sea-power: notably in the recent closing of the North Sea. Show how petrol, for instance, would no longer reach the Germanic powers at all if (*a*) Russia advances as far as Cracow in Silesia; (*b*) Roumania either forbids export to or enters into active hostilities with Germany.

(Signed by the Education Officer.)

A Circular Sent to Members of an Educational Staff in Ireland

Without dwelling too much upon it, we should endeavor to utilize the interest aroused by the present war in the interest of school work. This will be more especially possible in the standards above the third.

Will each master please consider in what directions he thinks this can be done for his own class, and let me have his suggestions so that we can make any necessary modifications in the schemes of work.

E. g., *4th standard:* Means of communication of Great Britain. Position of naval stations, camps, etc. Why railways, roads, etc., are being guarded. How war interferes with trade and industry. Ancient and modern methods of warfare.

5th standard: As above, and the geography of the war area. Bearing of topography upon war. Where fortified posts are placed and

why. Why Belgium is a battlefield. Position of fleets. Trade routes to the continent. How trade is affected.

6th and 7th standards: As above, with a brief account of the relations of the nations engaged. The importance of the Mediterranean. Why price of food has increased and may do so further. Area from which Britain obtains food and raw material. War and unemployment. A simple account of some of the government measures for insurance and relief.

There is no need for me to point out the importance of saying nothing at this juncture that would savour of party politics, or that would tend to cause anxiety or arouse hatred against other nations.

(Signed by a Principal.)

BOOK NOTES

A foundational study in the pedagogy of arithmetic. By Henry Budd Howell. New York, Macmillan Company, 1914. 328 p.

The writer here attempts to summarize the many widely scattered recent studies in the genesis, psychology and didactics of number in a way to make them readable and interesting, as well as more concisely contributory to the kind of material which he thinks the subject matter of the prolegomena to any future arithmetic demands. The dean of the school in which the study was made has a brief introductory note. The author classifies the studies which he reviews under genetic, psychological, statistical and didactic or apperceptive studies, which we think an excellent classification. He then describes the various experiments to determine ability of number apprehension and any fundamental processes, although this is far too briefly treated. Those who expect conclusions to be definitely drawn here will be disappointed but the work is a valuable contribution to the subject.

Travel notes of an octogenarian. By W. Spooner Smith. Boston, Gorham Press (c. 1914). 215 p.

A clergyman of eighty-eight made a trip around the world alone, and here records in a very interesting way his observations. He had leisure and took his time, and his notes are very modestly printed in the hope that they will act as an inspiration for the old. We are accustomed, he says, "to look on old age as a desert of inactivity and dull monotony. This record proves that it can be shot through with thrills and enthusiasms that might well be envied by vigorous youth." The result was more than the accomplishment of a journey for we are told that the author was made over. His eyes were opened and he felt for the first time the real joy of life. He hopes it will spur on others to do likewise. It makes no literary claims but is really a selection of letters.

Principles and methods in commercial education. By Joseph Kahn and Joseph J. Klein. New York, Macmillan Company, 1914. 439 p.

Part one is the principles, dealing in detail with essentials and value, the course of study, and general principles; part two, special methods, business arithmetic, office practice, book-keeping, accounting, commercial geography, the technique of commerce, its history and law, economics, business English, stenography and typewriting; part three, special problems, such as the preparation and equipment of teachers, relation of the secondary school to the high school of commerce and to the business community.

Principles of secondary education, written by a number of specialists. Edited by Paul Monroe. New York, Macmillan Company, 1914. 790 p.

This is a very valuable and comprehensive contribution to the subject, with twenty-one chapters, very largely by different experts. The editor sketches the history of the subject, Farrington, European sys-

tems; Cubberley, state systems; Snyder, rural high schools; Thomas, inspection; Lewis, administration; Snedden, the curriculum, the elective system, and the six-year course; Croswell, the private secondary school; Whipple, the physiology and hygiene of adolescence; Dewey, art in education, etc.

Child training as an exact science; a treatise based upon the principles of modern psychology, normal and abnormal. By GEORGE W. JACOBY. New York, Funk & Wagnalls Co., 1914. 384 p.

This is certainly an original volume, written purely from a medical point of view and with very little consideration of other topics, which a psychologist and pedagogue would expect, with 15 illustrations. After an historical survey comes the second part on the psychology of childhood, first the organs of mental activity, cords, nerves, psychic functions, development of mental activity, the psychic abnormalities, organic and functional, psychanalytic training from the point of view of parents, children, bodily and intellectual development, formation of character and will. Then comes therapeutic training, the educable, causal and symptomatic treatment, and the uneducable.

School discipline. By WILLIAM CHANDLER BAGLEY. New York, Macmillan Company, 1914. 259 p.

This work is written chiefly for the young teacher. It discusses what is meant by a well disciplined school, the causes of an unruly one, general and specific, its transformation and the qualitative standards of school work, the importance of the objective attitude, the individual assignments, stimulating group responsibility, the tonic influence of a regimen of work, the place and limitations of coercive measures; all these are forms of transforming the unruly school. Then the author treats coercion through rewards and penalties, corporal punishment and the reaction against it, contemporary school penalties, troublesome types, discipline and interest.

How to teach American history. By JOHN W. WAYLAND. New York, Macmillan Company, 1914. 349 p.

This is a text-book for normal schools, training classes, institutes, and a handbook for teachers and students. Its thirty chapters discuss such topics as the meaning of history, topics related to it, aims, survey of the field, place and time to begin, history in the grades and methods, in the high school, normal school, history in biography, dramatics, the visual appeal, dynamics in history teaching, why some pupils dislike it or fail, making and using questions, quizzes, use and abuse of dates, use of songs, source books, voyages of discovery, mnemonic devices, teacher's need to know books and himself, notebooks, etc.

The school, the child and the teacher. By ELLEN WINIFRED ADAMSON. New York, Longmans, Green & Co., 1915. 394 p.

This book consists of suggestions for students in training and is chiefly addressed to young teachers. The main topics are the school and its work; the student as learner, as teacher; the cultivation of speech; teaching reading, writing, spelling, grammar, composition, history, nature, geography, arithmetic, singing, drawing, handwork and physical education, each of which has a chapter.

Fritz Reuther; some things about his life and work, with a translation of a few of his humorous verses. By CHARLES H. THURBER. Boston, Privately printed, 1914. 51 p.

Dr. Thurber many years ago as a student in Germany was brought in contact with this writer, purchased his works and became familiar with *platt Deutsch.* He here gives us an extremely graphic pen-picture of his impressions of the man and his work, and in the appendix translates into verse a number of his poems.

Louis Clark Vanuxem Foundation. Lectures delivered in connection with the dedication of the Graduate College of Princeton University in October, 1913. Princeton, Princeton University Press, 1914. 144 p.

This contains four lectures by different men, viz., Boutroux, on "Science and Culture;" Riehl, "The Vocation of Philosophy at the Present Day;" Godley, "The Present Position of Classical Studies in England;" and Shipley, "The Revival of Science in the Seventeenth Century."

An appeal against slaughter. By MARION E. COVILLE. Syracuse, C. W. Bardeen (c. 1914). 161 p.

The first sixty pages of this nondescript book is labeled "An Appeal Against Slaughter." The rest of the book, pages 64 to 161, seems to be an index or a kind of analysis, and all is based on proverbs, scriptural and other passages, but what the book is and means or is for the writer is entirely unable to make out.

The teaching of handwriting. By FRANK N. FREEMAN. Boston, Houghton, Mifflin Company (c. 1914). 156 p.

This is an interesting and systematic work dealing with the nature of the problem, the constitution and development of the writing process, the physiology and hygiene of writing, how to teach it, the aims and standards of handwriting.

Charley Circus. By WILLIAM JAMES MORRISON. Nashville, Tenn., Smith & Lamar (c. 1914). 3 v.

One of these volumes is taken up with the Indians of Brazil, another with hunting and trapping in Brazil, while the other is entitled "In the Wilds of Brazil." They are narratives told evening by evening to children, in plain and homely wise.

Letters and papers of John Singleton Copley and Henry Pelham, 1739-1776. Boston, Massachusetts Historical Society, 1914. 384 p.

This sumptuous and illustrated volume contains documents of first importance and might be called almost a monumental contribution of this society to the history of the country.

The teaching of oral English. By EMMA MILLER BOLENIUS. Philadelphia, J. B. Lippincott Company (c. 1914). 214 p.

The chapters are, "One-minute talks" with beginners and older students, what to avoid, choice of a subject, debate in English and history, the symposium, composition, history club, organizing a government as a class exercise.

The black hand and other stories about schools. By C. W. BARDEEN. Syracuse, C. W. Bardeen, 1914. 213 p.

This new volume of six school stories does not dim the lustre of Mr. Bardeen's past achievements in this line. He is the story-writer of educational life in this country par excellence.

Handbook of exposition. By R. A. JELLIFFE. New York, Macmillan Company, 1914. 222 p.

This book on exposition treats of definition, analysis, the explanation of a process, expository narrative, description, the familiar essay, criticism.

A decade of American government in the Philippines, 1903-1913. By DAVID P. BARROWS. Yonkers-on-Hudson, World Book Company, 1914. 66 p.

This is a very interesting story, briefly and concisely told, and cannot fail to be of interest to those concerned.

Trades and professions. By GEORGE HERBERT PALMER. Boston, Houghton Mifflin Company (c. 1914). 36 p.

This is a characteristically lucid and original point of view which will be of the greatest interest to all concerned.

Important features in rural school improvement. By W. T. HODGES. (U. S. Bureau of Education, Bulletin, 1914, No. 25.) Washington, Government Printing Office, 1914. 59 p.

The Danish folk high schools. By H. W. FOGHT. (U. S. Bureau of Education, Bulletin, 1914, No. 22.) Washington, Government Printing Office, 1914. 93 p.

The rural school and hookworm disease. By JOHN A. FERRELL. (U. S. Bureau of Education, Bulletin, 1914, No. 20.) Washington, Government Printing Office, 1914. 43 p.

The demonstration play school of 1913. By CLARK W. HETHERINGTON. (University of California Publications, Education, Vol. 5, No. 2, pp. 241-288, July 30, 1914.) Berkeley, University of California Press.

Papers on the influence of smoke on health. Edited by OSKAR KLOTZ and WILLIAM CHARLES WHITE. (Mellon Institute of Industrial Research and School of Specific Industries. Smoke Investigation, Bulletin No. 9.) Pittsburgh, University of Pittsburgh, 1914. 173 p.

Dental clinics for school children. By EDWARD F. BROWN. (Reprinted from the Journal of the Allied Dental Societies, September, 1914.) pp. 437-448.

The health supervision of school children of New York City. By EDWARD F. BROWN. (Reprinted from The Medical Review of Reviews, September, 1914.) 10 p.

Fatigue and its effects upon control. By ISAAC EMERY ASH. (Archives of Psychology, No. 31, June, 1914.) New York, Science Press, 1914. 61 p.

History of the United States. By MATTHEW PAGE ANDREWS. Philadelphia, J. B. Lippincott Company (c. 1914). 426 p.

The History Teacher's Magazine. November, 1914. Vol. V, No. 9. Philadelphia, McKinley Publishing Co.

Makers of America; Franklin, Washington, Jefferson, Lincoln. By EMMA LILIAN DANA. New York, Immigrant Publication Society, 1915. 205 p.

Primer language reader series. By FRANKLIN T. BAKER, GEORGE R. CARPENTER, and FANNIE WYCHE DUNN. New York, Macmillan Company, 1914. 118 p.

The teaching of poetry in the high school. By ARTHUR H. R. FAIRCHILD. Boston, Houghton Mifflin Company (c. 1914). 184 p.

The anchorage; a philosophy of life in English verse. Foreword by ALFRED E. P. ROCKWELL. Worcester, Davis Press, 1914. 53 p.

Sheltered; a poem. By MARVIN M. TAYLOR. Worcester, Privately printed, 1912. 49 p.

Fifteenth annual report of the State Board of Insanity of the Commonwealth of Massachusetts, for the year ending November 30, 1913. Boston, Wright and Potter, 1914. 367 p.

American and private school directory. Volume seven. Compiled and published by HARRY J. MYERS. Chicago, Educational Aid Society (c. 1914). 292 p.